

Pestilentia in Nummis.

Beschreibendes Verzeichniss

der auf Epidemien von

Pest, gelbem Fieber, Cholera, auf Pocken-Erkrankungen und Inoculationen, auf Jenner, Sacco und die Vaccination, sowie der auf Hungersnöthe und andere Calamitäten

geprägten Medaillen.

(Als Manuscript gedruckt.)

Weimar

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PFEIFFER, (L)

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Dem Verzeichniss liegt zu Grunde die Sammlung des Medicinalraths Dr. L. Pfeiffer in Weimar. Gefällige Mittheilungen, welche die Vervollständigung der Sammlung oder des Verzeichnisses ermöglichen, werden unter vorstehender Adresse erbeten. Die in der Sammlung Dr. Pfeiffer's vorhandenen Stücke sind mit einem * bezeichnet.

Weimar, Februar 1880.



Rom.

12. Ca. 1580. Pestmedaille des Papstes Gregor XIII. Schlegel, (Biblia in Nummis 1703, pag. 18) beschreibt sie, wie folgt: „auf einer Seiten viele Leute von Schlangen gebissen, und nach einer geflügelten Schlangen oder Drachen auf einem Creutze sehend, überschrieben: SPES OPIS EJUSDEM (die Hoffnung zu derselben Hülffe) des Pabstes, der einen Drachen in seinem Stamm-Wappen führete, grosse Vorsorge, Mildigkeit, Vorbitte, und angestellte Gebete vor die Befreyung von der heftigen Pest, so damahls in Italien, Mayland, Trident und Venedig grassirte, anzudeuten. — Die andere Seite derselben enthielte des Pabstes Portrait, umschrieben: GREGORIUS XIII. PONT. MAX.“

Erfurt.

13. 1597. (Beschrieben nach Dominicus, Erfurt und das Erfurtische Gebiet, 1793; I. p. 117 No. 11.)

Av.: ANNO 1597 · SEIN IN ERFORD GESTORBEN 7765 MENSCH · AUF DORFFER SEIN 9676. Schrift von 8 Zeilen.

Rev.: Schrift von eben so viel Zeilen: ANNO 1598 SEIN ZUSAME GEGEBEN IN ERFFORD 556 BAR · GEDAUF 532 · GESTORB · 424 ·

14. 1597. (Dominicus, l. c. No. 10.)

Av.: Das behelmte Erfurtische Wappenschild.

Rev.: A · D · 1597 · ALS E · RVD · ZIG · V · E · SEB · KRA · RE · Innerhalb des Ringes: SEIN · | IN ERFOR | 7765 · MEN | SCHEN . V | ERSTOR | BEN . |

Altenburg und Weimar.

15. 1598.

Av.: Zwei stehende Engel, das Rautenschild zwischen sich haltend; darüber PS: 33. Umschrift: IMMITET : ANGEL : (VS) DOMI : (NI) INCIRCV (ITV) TIMENTI : (VM) EVM.

Rev.: Die fünf in's Kreuz gestellten Schilder von Thüringen, Henneberg, Landsberg etc.; dazwischen die Zahl 1-5-9-8. Umschrift: D · G · FRIDE · WIL · ADM · ET IOHAN · FRA · ET DVX · SAX ·

Orts-Thaler, beschrieben von Schlegel. Suppl. pag. 73. — Tentzel, Num. Sax. Tab. 27. VIII.

*16. 1600.

Av.: Zwei stehende Engel, das Rautenschild zwischen sich haltend; darüber: .PS : 33. Umschrift: IMMITTET : ANGE : DOMI : INCIRCV · TIMENTI : EVM *

Rev.: Die 5 in's Kreuz gestellten Schilder; dazwischen die Zahl 1-6-0-0. Umschrift: D: G: FRI · WIL · ADM · ET · IOHA · FRA · ET · DUC · SA.

Silber. Dm. 31. (Viertel Thaler.)

17. Tentzel (l. cit. p. 389) erwähnt ferner, dass 1602, nachdem Herzog Friedrich Wilhelm mit seinem Hofgesinde selbst von der Pest befallen gewesen, obige Münze erneuert worden, doch mit dem Unterschiede, „dass in der neuern der abgelegte Titel eines Administratoris nicht mehr zu sehen".

Breslau.

*18. 1633.

Av.: Ansicht der Stadt; oben das Auge Gottes, darunter auf Wolken ein Engel mit Flammenschwert und Geissel. Unten BRESLAW zwischen H.(ans)—R.(ieger) ES · IST · GENVG · LASSE · NVN · DEINE · HAND · AB · SAMVEL · 2. BVCH · 24. CAP.

Rev.: IM · JAHR · | 1633 · | SEINT · IN · DER · KAY | V · KÖNIGL · STATT · | BRESL: GESTORBEN · | 13231 · | DVRCH · GOTTES · HILFF · | V · FLEIS · DER · AERZTE · | GESUND · WORDEN · | 1406 · | GETAVFFT · | 1066 ·

Silber. Dm. 40.

19. Kundmann (Die Heimsuchung Gottes über das Herzogthum Schlesien in Münzen, 1774; pag. 108) beschreibt eine andere Medaille nach derselben Zeichnung; die Schriftseite zeigt statt 12 16 Zeilen, indem noch hinzugefügt ist: MIT. K. K. M. GNAD. | U. FREYHEIT. W. | HANS RIEGER. |

Frankfurt a. M.

20. 1635.

Av.: Ansicht der Stadt; darüber ein Engel mit der Zuchtruthe, und aus einer Wolke kommend die Worte: ES IST GENVG. Im Abschnitt: SAMV · 24.

Rev.: 1635 GROS | STERBEN · WAR | VERSCHINEN · JAR | 3421 AN · DER · ZAHL · WAR | KRIEG · TEVRVNG · GAR | MIT · VOLLER · MASS · | VNS · EINSCHENCKT · | GOTT · IM · GRIMME · DAS · | THVT · BVES · MEYD · SVND · | FORCHT · GOT · FVRWAR | IESVS · GIBT · DAN EIN | BESSER · IAR ·

Silber und Gold. — Dm. 27.

* 4. 1528. Beide Stempel gleich denen der vorigen Nummer, nur liest man * NVM — RI * 21 * statt 12.

Silber. Dm. 42.

* 5. 1528.

Av.: Die eherne Schlange Mosis, von Menschen angebetet. Oben 15—28. Darunter · NVM—RI · 21 · Umschrift in 2 Reihen: DER · HER · SPRAC · ZV · MOSE · MAC · DIR · EIN · ERNE · SLANG · VND · RICT · SI · ZVM · ZE | IGEN · AVF · WER · GEPISN · IST · VND · SIET · SI · AN · DER · SOL · LEBEN.

Rev.: Christus am Kreuz (mit INRI) von Menschen angebetet. Darunter IOAN—NES . 3 · Umschrift in 2 Reihen: GLEIC · WI · DI · SLANG · SO · MVS · DES · MENSEN · SON · ERHOET · WERDN · AVF · | DAS · AL · — DI · AN · IN · GLAVBEN · — HABEN · DAS · EWIC · — LEBEN ·

Silber. Dm. 47. Es giebt Abschläge von 30 und 60 Gramm. — Aehnlich Madai 2369.

* 6. (1528).

Av.: Die Eherne Schlange von Knienden und Sterbenden umgeben; zu den Seiten: NVM—II 21 · Die Schrift in 2 concentrischen Kreisen: DER · HER · SPRAC · ZV · MOSE · MAC · DIR · EIN · ERNE · SLANG · VNT · RICT · SI · ZVM · | ZEIGEN · AVF · WER · GEPISN · IST · VND · SICT · SI · AN · DER · SOL · IE * ·

Rev: Christus am Kreuz, von Knienden angerufen. Zu den Seiten * IOAN—NES * 3 *. In den 2 concentrischen Kreisen liest man: GLEIC · WIƎ · DI · SLANG · SO · MVS · DES · — MENSEN · SOON · ERHOET · WERDEN: | AVF · DZ · — AL · DI · AN · IN · GLAV — BEN · HABNN · DZ · EB — IG · LEB ·

Silber. Dm. 48.

* 7. Variante (durch andere Eintheilung und Orthographie); sie lautet folgendermaassen:

Av.: DER · HER · SPRAC · ZW · MOSE · MAC · DIR · EIN · ERNE · SLANG · VND · RICT · SI · | ZVM · ZEGN · AVF · WER · GEPISN · IST · VND · SICT · SI · AN · SOL · LE · Zu den Seiten des Kreuzes: * NVM—RI * 21 ·

Rev.: GLEIC · WI · DI · SLANG · SO · MVS · DESS · — MENSN · SON · ERHOT · WERDN · AVF · | DZ · AL · —DI · AN · IN · GLAVBE — N · HABN · DZ · EBI — C · LEBN ·

Silber. Dm. 47.

* 8. Aehnliche Medaille, aber nach anderer Zeichnung:

Av.: Die den Pfahl mit der Schlange Umdrängenden stehen meist, einer deutet zu derselben empor; die Schrift ist im Dialect wie durch die rein lateinische Form der Buchstaben verschieden: DER · HER · SPRACH · ZV · MOSE · MACH · DIR · EIN · ERNE · SCHLANG · VND · RICHT · SI · ZVM · | ZEICHEN · AVF · WER · GEBISSEN · IST · VND · SICHT · SIE · AN · DER · SAL · LEBEN · Zu den Seiten des Pfahles: · NVME — RI · 21 ·

Rev.: Christus am Kreuz, von Volk und Soldaten zu Fuss und zu Pferd umgeben; vorn die Gruppe der ohnmächtigen Maria. Oben: · IO · — · 3 · — Die Schrift in 2 Kreisen: GLEICH · WIE · DIE · SCHLANG · SO · MVS · DES · MENSCHEN · SON · ERHOET · WERDEN · | AVF · DAS · AL · DIE · AN · IN · GLAVBEN · HABEN · DAS · EWIG · LEBEN ·

Silber. Dm. 46. Gewicht 39 Gramm. — Madai 5203 und 5204.

9. 1531. Thaler mit ähnlichen Darstellungen.

Av.: Unterschrift in acht Zeilen: DER · HERR · SPRACH · ZV · MOSSE · MACHE · DIR · AIN · ERNE · SLANGE · VN · RICHT · SI · ZVM · ZAICHEN · AVF · WER · GEBISSE · IST · VND · SICHT · SI · AN · DER · SOL · LEBFN · NVMERI · 21 · M · D · XXX · I ·

Rev.: WIE · DI · SLANG : SO · MOSE · ERHOHET : SO · MVS · DES · MENSCHEN · SON · ERHOHET · WERDEN · AVF · DAS · ALL · DI · AN · IN · GLAVBEN · HAB · DAS · EWIG · LEBE · IOHA · 3 ·

Madai 5205.

10. (1525?) Thaler von grobem Gepräge mit ähnlicher Darstellung.

Av.: WER · DI · SLANG · SIEHT · SOL · NIT · STERB · NVM · 21 · Zu den Seiten des Kreuzes: IOANES · 3 ·

Rev.: WER · AN · MI · GLAW · HAT · DAS · EWI · LE · JOHA : 6 · Auf den Seiten NVMRI · 21 . Unten am Kreuze die (Jahr-?) Zahl 25.

Madai 5206.

11. (1587?) Thalerklippe mit ähnlicher Darstellung.

Av.: MAG · D · EIREN · SLANG · V · R · S · AVF · ZV · ZEI · W · GEB · I · V · SIGHT · SI · AN · DER · SO · LEB · N · An den Seiten: VM · 21 ·

Rev.: In zwei Reihen: 87 . GLEI . WI . D . SLANG . AL . MV . A · DES · M · SO · ERH · W · | I · B · A · D · AL · D · A · IN · G · N · VERLO · W · Auf den Seiten IOA · 3 ·

Madai 5207.

Inhalt.

I. Pest-Epidemien.

Römisches Reich.

* 1. 251—253.

Av.: Gekrönter bärtiger Kopf nach rechts. — Umschrift: IMP CAE GVIB TREB GALLVS LVG.

Rev.: Stehender Apoll, die Rechte nach links ausgestreckt, hält die Linke auf einen Altar gestützt. — Umschrift: APOLL SALVTARI.

Silberne Medaille. Dm. 20 mm. — 4 Gramm.

Wittenberg.*)

2. 1527. Schlegel, Biblia in Nummis, 1703, Supplement p. 22, beschreibt diese Medaille wie folgt: „auf einer Seiten man die eherne Schlange ansichtig wird, um welche viele Leute auf der Erde liegen, theils gestorben, theils sie ansehende, zur Seiten 1527. NV. 21. JOA. 3. umgeben mit dieser Schrifft: DER HER SPRAC ZU MOSE MAC DIR EIN ERNE SLANG, UND RICT SI ZUM ZEIGEN AUF, WER GEPISN IST, UND SICT SI AN, DER SOL LEWEN. Auf dem Revers aber trifft man Christum am Creutze hengende an, worunter unterschiedliche ihn anbetende Leute liegen, oben zur Seite des Creutzes: NUMERI 21. und folgende Worte herum: GLEICWI DI SLANG, SO MUS DES MENSEN SON ERHOET WERDEN, AUF DAS AL, DI AN IN GLAUBEN, DAS EWIC LEBEN. Wieget 1 Loth.“

3. 1528. (Beschreibung nach Schlegels Biblia in Nummis. Jena 1703, pag. 18).

Av.: Die am Holz aufgerichtete Ehrne Schlange, worunter Leute stehen, so solche ansehen, drüber aber Num. 12 (soll 21 heissen [4. Buch Moses 21. V. 8.]) 1528. mit dieser Umschrift: WER · DISE · SCHLANG · ANSIET · DER · SOL · NIT · STERBEN ·

Rev.: Christus am Creutz, mit darunter ihn gleichfalls ansehendem Volcke, zur Seite: IOAN—NES · 3 · herum: WER · AN · MICH · GELAUBET — HAT · DAS · EWICH · LEBEN ·

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*) Die Stücke 2—11 sind hier beschrieben, weil sie in den meisten Sammlungen zu Wittenberg gelegt und als auf die in den Jahren 1527 und 28 daselbst grassirende Pest bezüglich angenommen werden. Man vergleiche aber die Bemerkungen Madai's (zu No. 2369), die es äusserst wahrscheinlich machen, dass diese Stücke theils in anabaptistischen Kreisen, theils späterhin auf Speculation angefertigt wurden. Schon der Dialect der meisten Inschriften auf denselben weist mehr nach Niedersachsen und Westphalen als in die Gegend von Wittenberg.

Rom.

*21. 1657.

Av.: Büste des Papstes im Profil nach rechts, nur im Käppchen. ALEXAN · VII · PONT · MAX · A · III. Unter der Schulter: · G · (aspar) M(olo).

Rev.: Links am Boden liegende Kranke, von denen einer Blick und Hände zu dem oben mit den Schlüsseln schwebenden Petrus erhebt. Nach rechts entfernt sich eine geflügelte Gestalt, die auf der Linken einen Todtenkopf und in der Rechten ein Flammenschwert trägt. Links in der Ferne die Peterskirche. Darunter: VT UMBRA ILLIVS LIBERARENTVR.

Dm. 35.

*22. 1662. Medaille auf das 1657 während des Wüthens der Pest abgelegte Gelübde des Papstes.

Av.: Der mit der Tiara gekrönte Kopf im Profil nach links: ALEXANDER · VII · — PONT · MAX · Am Schulterabschnitt: G · M · und darunter AN · VIII · (1662).

Rev.: Die Façade von S. Maria in Campitelli. IMMACV-LATAE — VIRGINI · VOT · Im Abschnitt: ROMÆ.

Dm. 43.

23. Schlegel (Biblia in nummis, pag. 23) beschreibt eine andere Medaille auf dieselbe Veranlassung: wie der Papst „den Prospect der S. Marien-Kirche auf eine Medaille bringen liesse, die er völlig zu repariren bei grassirender Pest Gott gelobet, und den Grundstein selbst dazu geleget hatte, umschrieben: QUÆ VOVI REDDAM PRO SALUTE DOMINO. Auf der andern Seiten erblicket man des Pabstes Portrait umschrieben: ALEXANDER. VII. PONT. MAX. wiegt 2 Loth."

Erfurt.

24. 1683. Schlegel (Biblia in Nummis Suppl. pag. 44) beschreibt einen Gedenkthaler, wie folgt: „Diesen Würg-Engel (2. Samuel 24, V. 16) liessen die Herrn Erfurter nach der Befreyung von der Pest auff einen Thaler setzen, und zwar, wie er sein Würge-Schwerdt widerum in die Scheide stecket, und den Todt mit Füssen tritt, dabei die Worte: MORS JUGULANS CEDIT, VITA SALUSQUE REDIT. Auff der Seiten ersiehet man eine Taffel (darauf ein Todten-Kopff lieget mit zwei Todten-Beinen) worauf geschrieben: AO. 1683. SUMMA MORTUORUM 9477. Auff der andern Seite ist die Stadt Erffurt im Prospect zu sehen, worüber die Sonne aufgeht, mit der Ueberschrift: HOC REDEUNTE PERIT CONTAGIOSA LUES. Unter dieser Unterschrift: ERPHORDIA A PESTE LIBERATA ANNO 1683. EXEUNTE". (Dominicus l. cit. No. 14. — Madai 2222.)

Magdeburg.

25. 1683. Thaler.

Av.: Die Stadt mit der Elbbrücke bei aufgehender Sonne; oben das Wappen und ein Band mit den Worten: TANDEM LVX ALMA REVERTIT.

Rev.: Zwei weibliche Figuren und der Tod mit der Sense zu Pferd; oben das Auge Gottes und ein Band mit den Worten: VITA ADSTAT MORSQVE RECEDIT. Unten: MAGDB(urgum) A PESTE LIBERATVM MENS FEBR. 1683.

Madai 2283.

Breslau.*)

*26. 1704—1714.

Av.: Im unteren Theil das Wappen von Breslau. Schrift: NORD, OST, | SÜD, WEST, | WAR VOLLER PEST, DOCH HALF MIR GOTT | AUS ALLER NOTH. | BRES—LAU. | Im Abschnitt: VON MDCCIV — BIS | MDCCXIV.

Rev.: Ein Skelett sitzt auf einem Felsblock, an dem ein grosses W, mit Ketten an Händen und Füssen gefesselt; rechts vorn liegt Sense und Schippe. Oben das Auge Gottes. Umschr.: ES IST GENUNG, LASS NUN DEINE HAND AB. 2. SAM. XXIV 16. Im Abschnitt: ALLES WAS ODEM HAT | LOBE DEN HERRN. | HALLELUIA. | ENDE DES PSALTERS.

Scharf geschnittene Silber-Medaille. Dm. 33.

27.

Av.: Oben der Name Gottes, darunter eine Hand, aus Wolken kommend. Umschrift: DIE HAT DIE — STADT BEWACHT. — PS · XXXIII · 18 · 19 · Im Abschnitt: BRESLAV.

Rev.: Oben der Name Gottes, darunter eine ein Rauchgefäss schwingende Hand, aus Wolken ragend. Umschrift: GEHEILET — VNSER LAND · — NVM · 46 · etc. — Im Abschnitt: MDCCXIV.

Dm. 27. — Abbildung in Kundmann's Rariora Naturae et artis, 1737; Tab. XVII, 14.

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*) Eine Quelle reichster Belehrung über die von 1704—1715 in Polen, Oesterreich und Deutschland grassirende Pest bieten die Kundmann'schen Abhandlungen. (Heimsuchung Gottes, pag. 120—328; Rariora, pag. 1085—1312.) Im höchsten Grade interessant sind die in denselben mitgetheilten Mortalitäts-Tabellen, Temperaturbeobachtungen etc.

Ancona.

*46. 1734. Pest-Lazareth in Ancona.

Av.: Grosse Büste des mit der Tiara bekrönten und segnenden Papstes, im Profil nach rechts. Umschrift: CLEMENS · XII · — PONT · MAX · AN · III · Unten klein: OTTO HAMERANI · F ·

Rev.: Ansicht des Hafens von Ancona mit dem 5eckigen Lazareth im Meer; im Hintergrund auf hohem Ufer die Stadt. Umschrift: PVBLICAE · INCOLOMITATIS · PRAESIDIO. Auf der den Abschnitt bildenden Leiste: L · VANVITEL ARCH · INVENT · Im Abschnitt: DORICAE . VRBIS | LOEMOCOMIVM · | 1734 · Auf dem Rande darunter sehr klein: Die Römische Wölfin zwischen O · — H ·

Dm. 72.

Triest.

*47. 1769. Medaille auf das Quarantaine-Hospital zu Triest.

Av.: Die gegeneinander gekehrten Brustbilder. Umschrift: IOSEPHVS II M · THERESIA AVGG. Unten: A. WIDEMAN.

Rev.: Plan des Hafens von Triest mit dem Hospital, vorn 3 Schiffe. Umschrift: SECVRITATI PVBLICÆ ET COMERCIO. Im Abschnitt: POS. TERGEST 31. IVLY | MDCCLXIX.

Silberne Medaille. Dm. 41.

Es mag erwähnt werden, dass sich (in der Lempertz'schen Sammlung zu Köln?) ein Leprosen-Siegel, wohl aus dem Anfang des XVI. Jahrhunderts erhalten hat. Es zeigt einen in einer Capelle sitzenden Geistlichen, dem sich von rechts her ein Leprose nähert. Umschrift: SIGILLVM · LEPROSORVM · EXTRA · MVROS : CIVITATIS COLONIÊS.

Dm. 50 mm.

II. Medaillen auf Inoculationen und Pocken-Erkrankungen.

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* 1. Zu Ehren der Freifrau Catharina Charlotta de Geer, geborne Ribbing, welche sich 1756 zuerst in der höheren Gesellschaft Schwedens entschloss, ihre Kinder inoculiren zu lassen, liess der Graf C. G. Tessin nachstehende Medaille durch D. Fehrmann anfertigen:

Av.: Auf einem sich um einen Eichenkranz schlingenden Bande: CATH. CHARLOTT RIBBING. Innerhalb des Kranzes die fünfzeilige Inschrift: OB | INFANTES | CIVIUM SVEC. | FELICI AUSU | SERVATOS. | Unter dem Kranze: 1756.

Rev.: Eine Schlange windet sich um einen runden Altar nach einer auf demselben stehenden Schale empor. Umschrift: SUBLATO JURE NOCENDI. Im Abschn: VARIOLORUM.

Dm. 30 mm. — Ein Exemplar befindet sich im Königl. Münzkabinet in Stockholm.

2. Auf die durch Tronchin vollzogene Inoculation des Herzogs von Parma, 1764.

Av.: Büste; Umschrift: THEODORUS TRONCHIN.

Rev.: Allegorische Darstellung; Umschrift: TUTISSIMUS IBIS. Im Abschnitt: SECURITAS POPULI PARMENSIS. 1764.

12 Unzen schwer, in Silber. — Rudolphi 666. Duisburg CCCXLVII. Abgebildet in Joh. Müller's „Merkwürdige Ueberbleibsel".

3—8. Auf die Erkrankung der Kaiserin Maria Theresia an den Pocken; 1767.

*3 *Av.:* Büste der Kaiserin im Hermelin, im Profil nach rechts. Umschrift: M · THERESIA D · G · ROM · IMP · HUNG · & BOH · REG · A · AUST · Unter der Büste: M · KRAFFT · F ·

Rev.: In der Mitte das Oesterr. Schild mit der Kaiserkrone, auf welche die rechts auf Wolken schwebende Minerva einen Kranz legt; ein unter ihr kniender Knabe hebt ein brennendes Herz empor. Links Saturn, mit der Rechten empor deutend, in der Linken eine sich in den Schwanz beissende Schlange haltend. Ueber der Gruppe eine Hygiea (?), ein Scepter in der Rechten, darüber das Auge Gottes. Umschrift: PROVIDENTIA—VOTIS ET—ARTE. Am Sockel, auf dem das Ganze steht, links ein K · und vorn PARENTI OPTIMÆ | CLEMENTI IUSTAE | RESTITUTA SALUS | 1767 · |

Silber. Dm. 52.

36. 1714. Medaille in dem Grundstein der Pestsäule zu Meidling. Kundmann (p. 194) schreibt:

Avers wie oben.

Rev.: ACCIPE | S. S. TRINITAS | COLVMNAM QVAM | VOTO DEPRECATORIO | TIBI DICAVIT IN CONTAG· | VICVS MEIDLINGEN | EJVSQVE PRIM · LAP · POS · | IMP · CAES · CARO : VI · | GER · HI · HV · BO · REX · | M · DCC · XIV · XII MA.

37. u. 38. Aehnliche Medaillen wurden in die Grundsteine der Pestsäulen zu Neuburg und zu Mariahilf gelegt. (cf. Kundmann pag. 194 f., und Abbildungen in Rariora Artis, Tab. XVII, 6 u. 7.)

39. 1714. Medaille in dem Grundstein der Pestsäule zu Stockerau. Kundmann beschreibt sie, wie folgt:

Avers wie auf der Badenschen Medaille.

Rev.: IN HONOREM | PROPIT · S · S · TRINIT · | INTAMINATO CONCEPTVI | MAG · MATRIS VIRGINIS · | MVNICIPIVM STOCKERAV | OB LUIS PERICVL · VOVIT | COLVMNAM HANC | CVIVS PR · LAP · POSITVS · AUSPI · | IMP · CAES · CAR · VI · | G · HI · HV · B · REG · A · A · | MDCCXIV | 22 · IVL ·

Prag.

*40. 1715. Aufhören der Pest.

Av.: Ansicht der Stadt. Umschrift: DEVS IN DOMIBVS EIVS. PS. 47. Im Abschnitt: PRAGA A PESTE | LIBERATA.

Rev.: Die halbverfallene Tenne des Jebusiters; vorn 2 Rinder. Darüber schwebt ein Engel, in der Rechten ein Schwert, welches eine aus Wolken ragende Hand ergreift. Umschrift: SVFFICIT NVNC CONTINE MANVM TVAM. Im Abschnitt: II REG. XXIV. | V. 16.

Zinn-Medaille. Dm. 44.

Regensburg.

41. 1715. Kundmann beschreibt (pag. 199 sq.) zwei Medaillen auf das Erlöschen der Pest:

„*Av.:* Regenspurg von der Donauseite, zusammt der kostbahren Brücken mit folgender Inschrift: aDIVtore aLtIssIMo a peste LIberata seCVra. Auf dem Abschnitt ist zu lesen: RATISBONA.

Revers: knien vor einem Altar, dem Höchsten Dank zu opfern, Noa mit seinen drey Söhnen, Sem, Ham und Japhet, mit

daneben liegendem Gebürge Ararat und der Arca Noae, so sich darauf niedergelassen: die Umschrift lautet: ÆTERNO RATIS HAEC BONA FERT | POST FUNERA GRATES. Unten stehet: GEN · C · VIII · V · XX ·, woraus diese Historie genommen."

Ferner:

42. „Daselbst wurde von dem Münzmeister Herrn Joh. Michael Federer mit Obrigkeitlicher Genehmhaltung auf die glückliche Eröffnung der Pässe folgende Medaille geprägt: auf der einen Seite eine Weibs-Person mit einem Lorber-Crantze auf dem Haupte mit dem Cornu Copiae in der Lincken, und einem Schlüssel in der rechten Hand, durch die dabei in Gestalt einer klagenden Weibs-Person, die eine Stadt Crone neben sich liegen und einen Schleier aufgesetzet hatte, mit der einen Hand nach dem ihr gereichten Schlüssel langete, wurde das bisher in so grosser Noth und Elend gesteckte Regenspurg angezeiget: die Umschrift ist aus Virg. Æneid. Lib. II v. 740 genommen: OCULIS EST REDDITA NOSTRIS. Unten stand der Monaths-Tag: D. 3. MAI | . Die andere Seite stellete durch eine die Jahr-Zahl in sich haltende Schriftlinie deutliche Erklärung des auf der ersten Seite entfallenen Bildes vor: „Deo opItVLante ItInerIs LIbertas regIIs CastrIs | reDDIta."
Abbildungen in Kundmann's Rariora Tab. XVII, 9 und 10.

Wien.

*43. 1716.

Av.: Brustbild Carls VI. mit Lorbeer, nach rechts gewendet. Umschrift: IMP · CAES · CAROLVS · VI · AVG · P · FEL · P · P · Unter der Büste: *Richter.*

Rev.: 8 Zeilen in einem Kranz von breiten Gräsern: D · O · M · | OB CIVES · | IN PESTE SERUATOS | DICATAE | D · CAROLO BOR · | BASILICAE PR · LAP · | EX VOTO POS · | MDCCXVI · |

Silber. Dm. 42.

44. Kundmann (pag. 189) beschreibt eine Variante mit abweichender Schrift auf dem Revers: von der 5ten Zeile an heisst es: D. CAROLO BORROMAEO | BASILICAE PRIMVM LAPIDEM | EX VOTO POSVIT. | MDCCXVI.

*45. 1716.

Av.: Belorbeerter Kopf im Profil nach rechts, links unten: *Richter.* Umschrift: CAES · AVG · CAR · VI · R · IMP · S · A · GE · HI · HV · BO · REX · AR · A · D · BVR.

Rev.: Front-Ansicht der Kirche. Umschrift: QVOD POPVLVS — PESTE LIBERATVS. Im Abschnitt: DIVO CAROLO BOROM · | EX VOTO | MDCCXVI · und darunter klein: WAROV.

Silber. Dm. 55.

Hamburg.

*28. 1711. Viereckige Klippe.

Av.: Jenseits des Flusses am Horizonte die fernen Thürme der Stadt; vorn liegen Todte und Sterbende. Darüber auf Wolken ein Engel mit dem Schwerte; Umschrift: SO IHR EU | CH NICHT BESSERT WER | DET IHR ALLE ALSO UMB | KOMMEN. Im Abschnitt: *Periculum* | *ex aliis* | *capi-* | *to.*

Rev.: ACH! | GOTT BESSERE | ZEIT | UND LEUTE! | 1711. — Im Abschnitt: *Dabit Deus* | *hic quog* | *finem.* — Länge der Seite: 28 mm.

Krakau.

29. 1707. Kundmann (pag. 133) beschreibt diesen Pestpfennig folgendermassen:

„*Avers:* Der streitende Ritter mit dem Drachen St. George zu Pferde; Umschrifft: BEI GOTT IST RAHT UND THATT.

Revers: Unbekannte Characteres; die Umschrift lautet: SIGNUM: S. ROCHI CONTRA PESTEM PATRONUS.

welcher Pfennig von Zinn, Bley und Spiauter so gut als ein Gepräge gegossen; An. 1735 wurde er auch zu Breslau als Amulet verkauft.“

Dm. 42. — Abbildung in Kundmann's Rariora, Tab. XVII, 0.

Prag.

30. 1713. Kundmann (l. c. pag. 203) beschreibt eine (vermuthlich aus derselben Prägeanstalt wie No. 27 hervorgegangene) Klippe, auf deren einen Seite man die Stadt Prag sieht; darüber ein „fliegender Engel, so den rechten Arm in einem Schwerdt zum Streiche aufhebet, davor unten viele Leichen liegen; Umschrifft: SO IHR EVCH NICHT BESSERT, WERDET IHR ALLE ALSO VMKOMMEN. Im Abschnitt: *Periculum* | *ex aliis* | *capi-* | *to.* Auf der anderen Seite folgender Reim: DOCH | WERDT IHR EVCH | VON SVNDEN KEHREN, | SO WIRD AVCH GOTT | DER PLAGE | WEHREN. Im Abschnitt 1713.

Länge der Seite 28 mm. Abbildung in Kundmann's Rariora Tab. XVII numm. 12.

Hamburg.

31. 1714. Erlöschen der Seuche. Kundmann (l. c. pag. 218) beschreibt diese Medaille wie folgt:

„Avers stellet vor die Stadt Hamburg unter einem Frauenzimmer in lamentabeler Gestalt bei einer Bahre und offenem Grab stehend, auf welche Blitzstrahlen aus den Wolken fahren, mit der Umschrift: PATET ATRI IANUA DITIS. Auf dem Abschnitt stehet: URBIS DUM IANUA CLAUSA | D. 26. AUG: 1713. QUO HAMBURGENSIS REGIO: | A DANIS & LUNEBURG: | CIRCUMSESSA.

Auf dem Revers siehet man die Stadt Hamburg im Prospect, mit darüber geschriebenen Worten und darüber stehendem Stern: CLAUSUS DESCENSUS AVERNI. Auf dem Abschnitt ist zu lesen: AC URBIS APERTA VIA | D. 26 APRIL 1714. QUO CIRCUMPOSITA MILITIA | INDE RETRO | ABDUCTA EST."

Dm. 45. — Abb. Rariora, Tab. XVII, 15.

32. Eine zweite Medaille auf dieselbe Veranlassung beschreibt Kundmann (ibid.): „*Avers:* Hamburg von der Elb-Seite zu sehen, mit vielen auf der Elbe wiedrum ankommenden Schiffen. Umschrift: seDet sVb proteCtIone et tVteLa aLtIssIMI. Im Abschnitt: hambvrgvm a peste liberatvm.

Revers zeiget ein Feld, drüber ein Regenbogen in die Wolcken gesetzet, mit gegenstehender Sonne. Umschrift: post fvnera mvnera coeli. Unten: gen. ix. v. xiii."

Dm. 46. — Abb. Rariora, Tab. XVII, 16.

Wien und Umgegend.

*33. 1714.

Av.: Ansicht der befestigten Stadt. Umschrift: sIe Ist Iezt Vnter DeM sChVtz gottes sICher. Im Abschnitt: WIEN OHNE | W.

Rev.: Oben das Auge Gottes mit יְהוָה. In einem Kranze von 2 Oelzweigen 7 Zeilen: GOTT LIESS DEN | KAISER NICHT | WIE ER NICHT LIESS DIE | SEINEN | DIE PEST LIESS NACH IN WIEN | DAS BEST WIRD BALD | ERSCHEINEN. Unter dem Kranze klein: h.

Silber. Dm. 43. Nach Kundmann (pag. 195) in Augsburg geprägt.

*34. 1714. Medaille für die Pestsäule in Baden.

Av.: Belorbeerte Büste im Harnisch im Profil nach rechts. Unter dem rechten Armabschnitt: VESTNER · F. Umschrift: CAROLVS VI · D · G · ROM · IMP · S · A · GERM · HISP · HVNG · BOH · REX ·

Rev.: 11 Zeilen: COLUMNA | QVAM S. S. TRINITA | TI CIVIT: AQVAE CON- | TAGIONE LIBERATA | EX VOTO POSVIT | PRIMVM LAPIDEM DEBET | PIETATI AVG: | IMP: CAES: CAR: VI · | GER · HIS · HV · BO · REG: | AR: AV: MDCCXIV | 3. IVN.

Silber. Dm. 42.

35. Kundmann (l. c. pag. 192) beschreibt wohl eine Variante der letzten Medaille. Die Schrift ist etwas anders abgetheilt (z. B. schliesst Zeile 2 mit TRINITATI und Zeile 3 mit AQVAE), und die letzte Zeile lautet: DIE III JUNII.

* 4.

Av.: Büste der Kaiserin, Profil nach rechts. Links unten A · WIDEMAN · Umschrift: M · THERESIA · D · G · ROM · IMP · GER · HUNG · & BOH · RE · A · A ·

Rev.: Eine rechts kniende Frau mit Rauchfass beräuchert einen links stehenden Altar. An der Stufe rechts klein: A · W · Umschrift: DEO CONSERVATORI AUGUSTAE. Im Abschnitt: OB REDDITAM PATRIAE | MATREM 22 IVLII | M)CCLXVII · |

Silber. Dm. 46.

* 5.

Av.: Brustbild nach rechts. Umschrift: M · Theresia · D · G · R · — IMP · HU · BO · REG ·

Rev.: Die den Altar beräuchernde Frau. Umschrift: DEO CONSERVATORI AUGUSTAE. Im Abschnitt: OB REDDITAM PATRIAE | MATREM · 22 IULII | 1767.

Silber. 25 mm. In 3 Varietäten mit unwesentlichen Abweichungen.

* 6.

Genau wie No. 5 nur kleiner.

Dm. 21.

* 7.

Av.: Eine grosse Chiffre verschlungener Buchstaben. Umschrift: VIVAT DIV AC LAETE CONSTANTER AMEN. Im Abschnitt: EX ORE ET CORDE | HUMILL : DEVOTIS ·

Rev.: Oben das Auge Gottes: DEO | SIT GLORIA! | MARIA THERESIA | PER PRECES NOSTRAS | VERE SINCERAS | NOBIS | RESTITVTA EST |

Silber. Dm. 46.

8.

Av.: Brustbild im Harnisch nach links. Umschrift: CAR · ALEX · LOTH · — DUX BELG · PRAEF :

Rev.: Eine nach rechts gewendete, stehende Frau erhebt die linke Hand und in der Rechten eine Krone gegen einige aus Wolken scheinende Strahlen. Rechts liegt ein Löwe. Umschrift: DEO SOSPITATORI — AUGUSTAE. Im Abschnitt: BELGICA | GRATULABUNDA | MDCCLXVII.

Silber. 34 mm.

* 9. 1767. Auf die Erkrankung und den Tod der Erzherzogin Maria Josepha.

Av.: Profilbüste nach rechts; darunter: WIDEMAN. Umschrift: M · IOSEPHA AVSTR · FERDIN · IV · VTR · SICIL · REGI · DESPONS · 8 SEPT · 1767.

Rev.: Ein Engel mit Fackel mit einer weiblichen Figur nach rechts aufschwebend. Rechts unten: P·K· Umschrift: AD AETERNAS NVPTIAS DVCTA XV.OCT.MDCCLXVII· Im Abschnitt: NATA XIX·MARTII | MDCCLI· |

Silber. Dm. 42.

*10. 1768. Auf die Inoculation der Oesterreichischen Erzherzöge durch den eigens nach Wien berufenen Dr. Ingenhousz.

Av.: Die gegenübergestellten Büsten Joseph's II. und Maria Theresia's; darunter A·WIDEMAN· — Umschrift: JOSEPHVS II · M · THERESIA · AVGG·

Rev.: Inschrift in acht Zeilen: FERDINANDUS | MAXIMILIANUS | EORUMQUE NEPTIS | THERESIA · | ARCHIDUCES AUSTRIAE | DE INSERTIS VARIOLIS | RESTITUTI 29·SEPT· | MDCCLXVIII· |

Bronze. Dm. 41. Die Stempel der Medaille befinden sich noch in der Kaiserlichen Münze in Wien. Abgebildet in: „Schau- und Denkmünzen, welche unter der Regierung der Kaiserin Maria Theresia geprägt worden sind." Wien, 1782. Fol. S. 282 f.

*11. 1768. Auf die durch Dimsdale vollzogene Inoculation des Russischen Grossfürsten Thronfolger.

Av.: Büste der Kaiserin im Profil, nach rechts; darunter: КОП · В · АЛЕКСѢЕВЪ · — Umschrift: Б · М · ЕКАТЕРИНА · II · IМПЕРАТ · И САМОДЕРЖ · ВСЕРОСС · (I. M. Catharina II., Kaiserin und Selbstherrscherin aller Reussen.)

Rev.: Die Kaiserin, ihren Sohn an der Hand führend, spricht zu einer links stehenden Frau; hinter letzterer ein Knabe, an das Russische Wappenschild gelehnt, und ein zweiter, die Arme zur Kaiserin erhebend. Nach hinten rechts ein auf den Stufen eines Tempels verendender Drache. Umschrift: СОБОЮ ПОДАЛА ПРИМѢРЪ · (d. h. Selbst war sie Vorbild). Im Abschnitt: ОКТЯБРЯ 12 ДНЯ | 1768 ГОДА · (d. h. Den 12. October 1768.)

Bronze. Dm. 65. Die Stempel der Medaille befinden sich noch in der Kaiserlichen Münze in Petersburg.

III. Medaillen auf die Kuhpocken-Impfung.

a. Medaillen zu Ehren Jenner's.

1. Goldene Medaille, von den Aerzten der englischen Flotte Jenner überreicht.

   Av.: Apollo führt Britannia einen durch die Impfung geretteten Matrosen zu. Britannia bietet ihm eine Bürgerkrone mit Jenner's Namen. Umschrift: ALBA NAUTIS STELLA REFULSIT · 1801 ·

   Rev.: Anker, darüber: GEORGIO TERTIO REGE. Darunter: SPENCER DUCE.

   Rudolphi 338. Duisburg DCIX, 1. Kluyskens 1.

2. Goldene Medaille, Jenner am 4. März 1804 von der Medical Society in London verliehen.*)

   Av.: DON · SOC · MED · LONDIN · ANN · SALUT · 1773 · INSTITUT · E · JENNER · M · - D · SOCIO SUO EXIMIO OB VACCINATIONEM EXPLORATAM.

   Rud. 339. — Duisburg DCIX, 2. — Kl. 2. — Cf. Biogr. medic. V. 574.

*3. *Av.:* Büste Jenner's, nach links gewendet. Am Abschnitt des linken Armes: F · LOOS · Umschrift: EDUARD JENNER ENTDECKER DER SCHUTZIMPFUNG D · 14 MAI 1796 ·

   Rev.: Sieben Kinder umtanzen eine Kuh, die ein in Wolken schwebender Engel mit Blumen bekränzt. Umschrift: EHRE SEY GOTT — IN DER HÖHE Im Abschnitt: UND FREUDE | AUF ERDEN ·

   Silberne Medaille. Dm. 36. — Rud. 341. — Kl. 7. — Duisburg DCIX, 6. Die Stempel dieser und der folgenden Medaille befinden sich noch in der Loos'schen Prägeanstalt in Berlin.

*4. *Av.:* Brustbild nach derselben Zeichnung wie bei der vorigen Nummer; darunter: F · LOOS · Umschrift wie bei der vorigen Medaille.

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*) Die wahrscheinlich einzigen Präsentations-Exemplare von Nr. 1 und 2 scheinen spurlos verschwunden.

Rev.: Eine Frau kniet, nach rechts gewendet, und birgt ein Kind in ihrem Schoose vor dem giftigen Odem eines oben schwebenden Ungeheuers, indem sie mit dem von einer Schlange umwundenen rechten Arm einen Schild vorhält, auf welchem eine Kuh in Relief abgebildet. Umschrift: TRIUMPH! GETILGET IST DES SCHEUSALS LANGE WUTH·

Silberne Medaille. Dm. 28. — Rud. 342. — Kl. 13. — Duisburg DCIX, 7.
Siehe auch unter Frankreich No. 30 und 31.

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b. Medaillen zu Ehren Sacco's.

*5. *Av.:* Büste im Profil nach links; am Schulterabschnitt: P · T · F ·, d. h. Pietro Tadolini fecit. Umschrift: ALOYSIUS · SACCO · MEDIOL · MED · ET · CHIR · PROF ·

Rev.: In einem Eichenkranze mit Schlangen - Schlinge eine dreizeilige Inschrift: IENNERI · AEMULO · AMICI · BONONIENSES · | A · I · AB · ITAL · REP · CONS ·

Bronze-Medaille. Dm. 55. — Rud. 57. — Duisb. CIII, 1. — Kl. 3.

*6. *Av.:* Hygiea, um deren rechten Arm sich eine Schlange ringelt, führt einen am rechten Arm geimpften Knaben vor die rechts stehende Büste Sacco's, dass er sie bekränze. Am Piedestal der Büste die Reliefdarstellung einer Kuh, daneben die Initialen des Stempelschneiders L · M(anfredini). Umschrift: SIC MORBVS MORBO CVRATVR. Im Abschnitt: VIII · KALENDAS · MAII | ANNO · I · REIP · ITALICAE | MDCCCII ·

Rev.: Sechszeil. Inschrift: ALOYSIO · SACCO | JENNERIANAE · INSITIONIS | PRIMO · IN · COENOMANIS | PROPAGATORI · BENEMER · | MVNICIPIVM | GRATES · |

Bronze-Medaille. Dm. 55. — Rud. 58. — Duisb. CIII, 2. — Kl. 4.

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c. Medaillen zur Beförderung der Impfung, Belohnung der Aerzte etc.

Deutschland.

Zwei Preussische Staats-Prämien:

*7. *Av.:* Büste des Königs mit Hermelin-Mantel und Ordensband, im Profil nach rechts; darunter der Name des Stempelschneiders ABRAMSON · Umschrift: FRID · WILHELMVS III BORUSS · REX PATER PATRIAE ·

Rev.: Hygiea, auf einer Kuh durch das Meer reitend, eilt einem links befindlichen, blumigen Ufer zu; in der ausgestreckten Rechten hält sie eine Schale, um den Arm windet sich eine Schlange. Umschrift: IN TE SVPREMA SALVS · Im Abschnitt: VACCINATIONIS | PRAEMIVM ·

Silberne Medaille. Dm. 65. — Kl. 24.

*8. *Av.:* Kopf des Königs im Profil nach rechts; unter dem Halsabschnitte: GOETZE F · Umschrift: FRIEDRICH WILHELM III · — KOENIG VON PREUSSEN ·

Rev.: Ein links sitzender Arzt ist beschäftigt, zwei ihm von der Mutter zugeführte Kinder zu impfen; im Hintergrunde eine Kuh, rechts ein drittes Kind in der Wiege. RAUCH INV · — GOETZE F · Umschrift: DEM VERDIENSTE UM DIE SCHUTZIMPFUNG ·

Silberne Medaille. Dm. 53. — Gewicht 116 Gramm.

Im Jahre 1866 zuletzt an Dr. Schomburg-Dresden verliehen. Die Stempel dieser und der vorhergehenden Medaille befinden sich in der Königlich Preussischen Münze zu Berlin.

*9. Silberne Prämien des von Dr. Joh. Emanuel Bremer geleiteten Impf-Institutes, bestimmt zur Vertheilung an Mütter.

Av.: Stehendes Kind, nach links gewendet, eine Rose in der Linken, mit der Rechten auf den linken Oberarm deutend; vor ihm liegt ein Füllhorn, rechts steht ein blühender Rosenstrauch und darunter der Buchstabe L(oos). Umschrift: EDUARD JENNER'S WOHLTHÄTIGE ENTDECKUNG · Im Abschnitt: VOM 14 · MAI 1796 ·

Rev.: ZUM | ANDENKEN | AN | ERHALTENEN | UND | MITGETHEILTEN | SCHUTZ — GEREICHT VOM | DOCTOR BREMER | IN BERLIN | 1803.

Dm. 25. — Rud. 340. — Duisb. DCIX, 3. — Kl. 5. — Cf. Bremer, Die Kuhpocken. Berlin, 1804.

*10. Silberne Medaille von ganz gleicher Grösse und Zeichnung; als einzigen Unterschied trägt der Revers das Datum 1811 und darunter den Zusatz: 8. L. 6. GR.

Kluyskens 6.

Der um die Einführung der Impfung verdiente Dr. Joh. Emmanuel Bremer war geboren zu Rügenwalde 1745 und starb zu Berlin 1816.

*11. Silberne Prämie des Dr. Friedrich Wilhelm Ludwig Hirt (geb. zu Jena 1761, gest. in Zittau), praktischen Arztes in Zittau.

Av.: Kniendes Kind, in der Linken eine Rose haltend, mit der Rechten auf die fünf Impfpusteln am linken Oberarm deutend. Umschrift: DIESS ERHÄLT MIR LEBEN GESUNDHEIT U: WOHLGESTALT.

Rev.: Siebenzeilige Inschrift: ZUM | ANDENKEN | AN DIE | SCHUTZ | BLATTERN | VON D[r.] HIRT | IN ZITTAU.

Dm. 21. — Rud. 318. — Duisburg CCCLXXVII.

*12. Silberne Prämien-Medaille.

Av.: Ein stehender Engel bekämpft mit Speer und Schild (auf letzterem eine Kuh abgebildet) einen rechts sichtbaren Drachen; links kniet eine Frau und sucht ihr Kind im Schoosse zu bergen. Im Aschnitt: G · LOOS DIR · L · HELD · FEC ·

Rev.: Fünfzeilige Inschrift: FÜR | WILLIGE | MITTHEILUNG | DES IMPF- | STOFFES ·

Dm. 25. — Kl. 10.

Die Stempel dieser Medaille befinden sich in der Loos'schen Prägeanstalt in Berlin.

13. Silberne Medaille.

Av.: Ein Kind steht, von vorn gesehen, und deutet mit der Linken auf den rechten Oberarm; den rechten Fuss setzt es auf eine am Boden liegende Schlange; links erblickt man die aufgehende Sonne, rechts einen Rosenstrauch. Umschrift: DANK DER GÜTIGEN VORSEHUNG · Im Abschnitt: KRÜGER · *)

Rev.: Siebenzeilige Inschrift in einer achteckigen Perl-Linie: WOHL | THÄTIGE | ENDECKUNG | DER | SCHUTZ-POCKEN | DURCH | ED: JENNER · |

Dm. 30. — Duisburg DCIX, 8. — Kl. 8. (der irrthümlich die Grösse zu 4 cm angiebt).

*14. Silberne Prämien-Medaille.

Av.: Ein im Profil nach rechts knieendes Weib zeigt auf die Impfstellen am linken Arme des auf seinem linken Knie sitzenden Kindes; rechts steht eine Vase mit Blumen, an welcher ein Wappenschild mit einem Löwen; oben das strahlende Auge der Vorsehung. Umschrift: WIR DANCKEN DIR — FÜR DIESE WOHLTHAT · Im Abschnitt: *A. Guillemard f.*

Rev.: Ein Aesculap-Stab in Mitten zweier Kränze von Eichen und Rosen. Umschrift: GESTALT GESUNDHEIT · — LEBEN GESCHÜTZET · Im Abschnitt: SCHUTZPOCKEN | COMMISSION · | 1803.

Dm. 27. — Duisburg DCIX, 5. — Kl. 12.

Für das Königreich Böhmen in Prag geprägt.

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*) Entweder Friedrich Heinrich oder Christian Joseph Krüger, die beide in den Jahren von 1787 bis 1814 als Medailleure in Dresden thätig waren.

Frankreich.

*15. *Av.:* Der belorbeerte Kopf Napoleon's im Profil nach rechts; darunter: DENON DIR · | ANDRIEU F · Umschrift: NAPOLEON — EMPEREUR·

Rev.: Aesculap und Venus stehend und sich anblic end, von vorn gesehen; Aesculap lehnt sich mit der rechten Schulter auf den Schlangenstab und legt die Linke auf die linke Schulter der unbekleideten Göttin. Im Felde links eine Kuh, rechts eine offene Impflanzette über einem Impfstäbchen. Unten links: ANDRIEU F·, rechts: DENON DIR· Im Abschnitt: LA VACCINE | MDCCCIV·

Dm. 41. — In Silber, 35 Gramm schwer. — Kl. 14.

*16. *Av.:* Belorbeerter Kopf im Profil nach rechts; am Halsabschnite: ANDRIEU F· — Umschrift: NAPOLEON — EMP·ET ROI·

Rev.: Wie oben.

Dm. 41.

*17. *Av.:* Belorbeerter Kopf im Profil nach rechts; am Halsabschnitte: DROZ FECIT· Darunter: DENON DIREXI | M·DCCC·VI· Umschrift: NAPOLEON — EMP·ET ROI·

Rev.: Zwei Lorbeerkränze um ein frei gelassenes Feld. Auf vorliegendem Exemplar ist eingravirt: VACCINE· | M^R. BOURIAT | A TOURS· | 1806 ET 1807·

Silberne Medaille. — Dm. 40.

*18. *Av.:* Eine stehende Kuh, im Profil nach links; über derselben ein Impfstäbchen und daneben eine offene Impflanzette. Links unten: DE PAULIS·F· Im Abschnitt: EX INSPERATO | SALUS·

Rev.: Vierzeilige Inschrift in einem Eichenkranze: VACCINATIONS | MUNICIPALES | DE PARIS· | MDCCCXIV.

Dm. 32. — Kluyskens 16.

*19. *Av.:* Kopf Ludwig's XVIII. (mit Haarschleife im Nacken) im Profil nach rechts. Unter dem Halsabschnitt: GAYRARD F·, und weiter unten: DE PUYMAURIN D· Umschrift: LOUIS XVIII ROI — DE FRANCE ET DE NAV·

Rev.: Dieselbe Darstellung wie bei No. 15, nur trennt ein horizontaler Strich das Datum MDCCCIV von den Worten: LA VACCINE; ferner liest man links unten: ANDRIEU und rechts: FECIT·DE PUYMAURIN DI·

Dm. 41.

*20. *Av.:* Kopf im Profil nach rechts; darunter: PUYMAURIN D·, und am Halsabschnitte: ANDRIEU F· Umschrift: LOUIS XVIII·ROI DE — FRANCE ET DE NAVARRE·
Rev.: Wie bei No. 19.
Dm. 41.

*21. *Av.:* Gleich dem Revers der vorhergehenden Nummer.
Rev.: Ein Lorbeerkranz umgiebt das für den einzugravirenden Namen des zu Prämiirenden leer gelassene Feld.
Dm. 41. — Kluyskens 15.

22. *Av.:* Profilbüste nach rechts; darunter: DE PAULIS F· Umschrift: LOUIS XVIII · ROI DE FRANCE ET DE NAVARRE ·
Rev.: MINISTÈRE DE L'INTÉRIEUR — COMITÉ CENTRAL DE VACCINE FORMÉ LE XI·MAI 1800·
Dm. 42. — Kluyskens 22.

23. *Av.:* Profilbüste nach rechts; darunter: GAYRARD F · DE PUYMAURIN·D· — Umschrift: LOUIS XVIII·ROI DE FRANCE ET DE NAVARRE·
Rev.: In einem Lorbeerkranz: MINISTÈRE DE L'INTÉRIEUR · SOCIÉTÉ GÉNÉRALE DE VACCINE·
Dm. 42. — Kluyskens 23.

*24. *Av.:* Profilkopf nach rechts; darunter: DE PAULIS F· | DE PUYMAURIN·D· Umschrift: CHARLES X ROI — DE FRANCE ET DE NAV·
Rev.: Genau wie bei No. 15 oben.
Dm. 41.

*25. *Av.:* Belorbeerter Kopf im Profil nach rechts; darunter: CAQUÉ F· Umschrift: LOUIS PHILIPPE I — ROI DES FRANÇAIS·
Rev.: Genau wie bei No. 15.
Dm. 41.

26. *Av.:* Wie vorher bei No. 25.
Rev.: Umschrift: SOCIÉTÉ NATIONALE DE VACCINE FONDÉE EN 1829· Ein Eichenkranz umgiebt ein für den Namen des zu Prämiirenden leer gelassenes Feld.
Kluyskens 26.

*27. *Av.:* Eine Kuh im Profil nach links; darüber offene Impflanzette und Impfstäbchen.

Rev.: Umschrift: DÉPARTEMENT D'INDRE ET LOIRE· Darin: COMITÉ | CENTRAL | DE VACCINE | FONDÉ A TOURS | LE 23 JUIN 1810 | ET RÉORGANISÉ | LE 25 JUILLET 1839.

Achteckig, in Silber. Dm. 30.

*28. *Av.:* Weiblicher Kopf mit Diadem und Kranz, im Profil nach rechts; darunter: E·ROGAT· Umschrift: REPUBLIQUE — FRANÇAISE·

Rev.: Genau wie bei No. 15.

*29. *Av.:* Belorbeerter Kopf im Profil nach rechts; darunter: BARRE· Umschrift: NAPOLEON III — EMPEREUR·

Rev.: Wie bei No. 15.

Die Stempel zu No. 16, 20, 24, 25, 28 und 29 befinden sich noch in der Münze zu Paris.

30. *Av.:* Jenner's Büste von vorn, von zwei Palmzweigen umgeben; darunter: 1749, und nach links: HAMEL ET LECOMTE· Umschrift: EDWARD JENNER·

Rev.: Zwei verschlungene Lorbeerzweige und in deren Mitte: MEDAILLE DE 1re CLASSE· Umschrift: COMITE CENTRAL DE VACCINE DU DÉPARTEMENT DU NORD·

Silberne Medaille. Dm. 40. — Kluyskens 9.

*31. Eine Variante der vorhergehenden Medaille.

Av.: Büste Jenner's, sehr wenig nach links, auf einem Sockel und von zwei Palmenzweigen umgeben; am Sockel: 1749· Umschrift: EDWARD JENNER· Links unten klein: HAMEL & LECOMTE

Rev.: Umschrift: COMITÉ · CENTRAL · DE · VACCINE · DU DÉPARTEMENT · DU · NORD· Innerhalb derselben ein Lorbeerkranz und unter diesem: MÉDAILLE DE 2E CLASSE· In dem freien Mittelfelde eingravirt: A | Mr CUISINIER | (VIRGINIE) | OFFICIER DE SANTÉ | 1876

Silberne Medaille. Dm. 36.

Holland und Belgien.

32. *Av.:* Büste mit Perrücke, aber antiker Gewandung, nach rechts gewendet; am Schulterabschnitt: LAGEMAN · F· Umschrift: PHOEBUS HITZERUS THEMMEN · M · D · INSTITUIT MDCCCIII·

Rev.: Umschrift: HET AMSTERDAMSCH KOEPOK-INENTINGS GENOOTSCHAP· In der Mitte ein Lorbeerkranz um ein frei gelassenes Feld.

Silber. Dm. 35. — Rudolphi 654. — Kluyskens 25. — Duisburg CCCCXCVII.

Dr. Themmen war der Stifter der auf der Medaille genannten Gesellschaft zur Ausbreitung der Impfung.

33. *Av.:* Büste Napoleons I. im Profil nach rechts.

Rev.: Gravirte Inschrift: ANTVERP: CIVIT: DOCTORI-MEDICO DOMINO LUDOVICO HENRICO JOSEPHO VRANCKEN METHODI JENNERIANAE PROPOGATIONE IN ANNO MDCCCVII PERILLUSTRATO.

Goldene Medaille. Dm. 65. — Kluyskens 17.

Dr. Vrancken war geboren zu Löwen 1773 und starb zu Antwerpen den 1. Januar 1853.

34. *Av.:* Büste Napoleons I. im Profil nach rechts.

Rev.: MINISTÈRE DE L'INTÉRIEUR·— SOCIÉTÉ GÉNÉRALE DE VACCINE·— M·DEMANET, CHIRURGIEN A GAND.

Silberne Medaille. Dm. 35. Kluyskens 18.

M. G. Demanet war geboren zu Gent am 30. Juli 1747 und starb daselbst den 15. September 1831.

35. Einseitiges Medaillon in vergoldetem Silber (Dm. 40.) mit der gravirten Darstellung der heiligen Kuh der Hindu und zwei Ovidischen Versen:

JUPITER E TERRA GENITAM MENTITUR UT AUCTOR
DESINAT INQUIRI...
POTERAT NON VACCA VIDERI.

Dieses Medaillon wurde von L. de Bart gefertigt und Dr. Demanet am 22. Juli 1821 überreicht.

Kluyskens 19.

*36. Staatsprämie für Aerzte, welche in einem Jahre wenigstens hundert Personen umsonst geimpft hatten.

Av.: Eine Kuh; über ihr schwebt Fama, in die Posaune stossend, in der rechten Hand einen Aeskulapstab; links unten: FABRIEK | H·D·HEUS· Im Abschnitt: MDCCCIX· Umschrift: VOLITAT·IAM·FAMA·PER·ORBEM·

Rev.: Um einen Eichenkranz die Umschrift: PRO·VARIOL· VACC·INSIT·PLUS·C·CIVIB·UNO·ANN·GRATIS· ADMINISTR· Das innere Feld frei zum Eingraviren der Namen.

Dm. 40. — Die Stempel befinden sich in der Münze zu Utrecht.

Kluyskens (No. 21 u. 21) beschreibt die an M. Demanet te Gent 1824 und an C. Kluyskens HEELMEESTER TE ST. GILLIS-WAAS 1825 ververliehenen goldenen Exemplare dieser Medaille.

(Dr. Kluyskens war geboren zu Erpe den 5. April 1788, starb zu St. Gilles-Waas den 25. März 1858.)

*37. *Av.:* Kopf im Profil nach links; darunter: BRAEMT F· Umschrift: LEOPOLD PREMIER — ROI DES BELGES·

Rev.: Stehende Kuh im Profil nach rechts, im Felde unter dem Kopfe eine offene Impflanzette. Ueber der Kuh in zwei graden Zeilen: PROPOGATION | DE LA VACCINE· Im Abschnitt der Schlangenstab Aeskulap's.

Dm. 33. — Kluyskens 28.

38. Probe - Abschlag der vorhergehenden Medaille mit dem Unterschiede, dass der Abschnitt des Reverses statt des Schlangenstabes die Worte zeigt: D'APRÈS E. VERBOECKHOVEN BRAEMT F·

Kluyskens 27.

39. *Av.:* Kopf im Profil nach links; darunter: S · WIENER· Umschrift: LEOPOLD II · ROI DES BELGES·

Rev.: Derselbe wie bei No. 38.

Dm. 33. — Kluyskens 29.

No. 37—39 sind Exemplare der Königl. Belgischen Staatsprämie; nach Dr. Kluyskens' Mittheilung wird dieselbe seit 1868 nicht mehr verliehen.

Italien.

*40. *Av.:* Pius VII. mit der Tiara; Büste im Profil nach links. PIVS SEPTIMVS PONT· — MAX·ANNO XXIV· (1823.) Rechts unten: GIROMETTI·F·

Rev.: In 2 verbundenen Eichenzweigen: DE SALVT · PVB | BENEMERENTI· Unten klein: L·G·

Dm. 44.

Russland.

*41. *Av.:* Büste der Kaiserin Catharina im Profil nach rechts. Umschrift: Б · М · ЕКАТЕРИНА II ИМПЕРАТ · И САМОДЕР · ВСЕРОССИИСК · d. h. I. M. Catharina II., Kaiserin und Selbstherrscherin Russlands.

Rev.: Eine übermässig schlanke Hygiea versammelt sieben nackte Knaben unter ihrem Mantel; über ihrem Haupte ein Stern. Umschrift: ЗА ПРИВИВАНIЕ ОСПЫ · d. h. Für Impfung der Blattern.

Bronze-Medaille. — Dm. 66.

*42. *Av. & Rev.* mit denselben Darstellungen, nur liest man noch unter der Büste der Kaiserin die Buchstaben Н·КОЗ·К· und im Abschnitte des Reverses КОП·В·В·

Bronze-Medaille. Dm. 40.

*43. *Av. & Rev.* mit denselben Darstellungen und Inschriften. Unter der Büste der Kaiserin steht КЛЕ· und im Abschnitte des Reverses Р·А·ЛЯЛИНЪ·

Bronze-Medaille. Dm. 30.

*44. *Av.:* Die gekrönte Chiffre Alexander's I. in einem Strahlenkreise; darunter: ЗА | ПОЛЕЗНОЕ | МУЛЛѢ АСАНЪ- | ДАУТЪ АДЖIЕВУ | 1805 · Г · | d. h. Für das Gemeinnützige; Mulla Asan Daut Adschieff. 1805.

Rev.: Oben die Russische Krone in einer Strahlenglorie, darunter drei Zeilen in arabischer Schrift.

Bronze-Medaille. Dm. 52.

Geschlagen zu Ehren Hassan Daut's, eines im Gouvernement Astrachan lebenden Muhammedaners, der für die Impfung der dortigen Nomadenbevölkerung wirkte. — Cf. Dr. Rüppell, in Wien. Num. Z., VI u. VII, pag. 218; No. DXXII, e.

*45. *Av.:* Der Kopf Kaiser Nikolaus' im Profil nach rechts. Am Halsabschnitte die Buchstaben В·А· Umschrift: NICOLAI I· KEISARI·KOKOVENÄÄN ITSEVALT·SUOMEN SUURIRUHTIN· d. h. Nikolaus I., Kaiser aller Reussen, Selbstherrscher, Finnland's Grossfürst.

Rev.: Dieselbe Darstellung wie bei den drei vorigen. Umschrift: VAKSININ ISTUTTAMISEN EDESTA· d. h. Für Vaccination.

Bronze-Medaille für Finnland. Dm. 40.

Die Stempel dieser 4 Russischen Medaillen befinden sich in der Kaiserlichen Münze in Petersburg.

*46. *Av.:* Dieselbe Darstellung wie bei No. 9, pag. 20. Umschrift: DONATUM A DOCTORE MED: JOH: DAVID LANGE· Im Abschnitte: GORZDA | 1811·

Rev.: Siebenzeilige Inschrift: AD | GLORIAM | DEI | UTILITATEMQUI (sic!) | MAGNI | IMPERII | RUSSICI· |

Silberne Prämie des Dr. Lange. Dm. 26.

Duisburg DCIX, 4.

Laut einer gefälligen Mittheilung Herrn Dr. Merzbacher's in München war Dr. Lange Hausarzt des Gutsherrn von Gorzda, eines Freiherrn von Rönne, und in dieser Stellung thätig für Ausbreitung der Vaccination unter der Landbevölkerung. (Gorzda, zu deutsch Garsden, ein kleiner unreinlicher Ort in anmuthiger Gegend Litthauens, unweit der preussischen Grenze, etwa 5 Stunden von Memel.)

Schweden.

Staatliche Vaccinations-Prämien.

*47. *Av.:* Kopf im Profil nach rechts; unter demselben: L · P · L · (Ludwig Persson Lundgren). Umschrift: CARL XIV JOHAN SVERIGES NORRIGES G · OCH V · KONUNG · d. h. König von Schweden, Norwegen, der Gothen und Wenden.

Rev.: In einem Eichenkranz die dreizeilige Inschrift: FÖR | BEFRÄMJAD | VACCINATION · d. h. für Beförderung der Impfung.

Dm. 35. — Ebenso bei den drei folgenden.

*48. *Av.:* Kopf im Profil nach rechts; darunter: L · P · L · F · — Umschrift: OSCAR SVERIGES NORR · GÖTH · O · VEND · KONUNG ·

Rev.: Wie oben.

*49. *Av.:* Kopf im Profil nach rechts; darunter: L · A · — Umschrift: CARL XV · SVERIGES NORR · GÖTH · O · VEND · KONUNG ·

Rev.: Wie oben.

*50. *Av.:* Kopf im Profil nach rechts; darunter die Buchstaben L · A · — Umschrift: OSCAR II · SVERIGES NORR · GÖTH · O · VEND · KONUNG ·

Rev.: Wie oben.

Die Stempel dieser 4 Medaillen befinden sich in der Königlichen Münze zu Stockholm; in Silber geprägt beträgt das Gewicht 20 Gramm.

IV. Gelbes Fieber.

Barcelona.

*1. 1821. Gelbes Fieber zu Barcelona.

Av.: Die liegende Figur der Stadt mit Mauerkrone und Wappenschild wird von der links zu ihren Häupten stehenden Fides unterstützt, welche ihr das Kreuz vorhält, während rechts Hygiea mit Schlangenstab ihr eine Schale reicht. Im Hintergrund Mauer und Thürme; über der Gruppe schwebt ein Engel, der ein Gefäss ausgiesst. Umschrift: PIETAS — GALLICA · Im Abschnitt: SAEVIENTE IN BARCINONAM | PESTILENTIA | MDCCCXXI · Links GAYRARD INV ·

Rev.: V · VIRI · MEDICI | QVORVM · PRIMVS · OCCVBVIT · | MAZET · | PARISET · | BALLY · | FRANÇOIS · | AUDOUARD · | SANCTI-MONIALES · II · | SANCTO · CAMILLO · DEVOTAE · | LVDOVICI · XVIII · | REGNI | ANN · XXVIII · | Links ein Lorber-, rechts ein Palmzweig. Umschrift: MORTE · VENALEM · PETIERE · PALMAM ·

Prachtvolle Silbermedaille, 60 gr. schwer. Dm. 48.

V. Cholera.

Warschau.

*1. 1831.

Av.: Ein alter Mann mit Fledermausflügeln, eine Vase vor sich haltend, geht nach rechts hin, wo ein dürrer Baum steht. Unten: ST.

Rev.: PIERWSZE | ZIAWIENIE SIĘ | CHOLERY | W WARSZAWIE | 1831. d. h. Erste Erscheinung der Cholera in Warschau 1831.

Silber. Dm. 23.

Berlin.

*2. 1831/32.

Av.: Die links sitzende und an ihr Wappenschild gelehnte Berolina wird von einem rechts herankommenden geflügelten bösen Genius mit Flammenschwert und Giftbecher bedroht. Rechts neben: C.PEUFFER F. Im Abschnitt: BERLIN VON DER ASIAT. | CHOLERA ERREICHT | D. 31 AUG. 1831. Umschrift um das Ganze: DEMÜTHIGET EUCH NUN UNTER DIE GEWALTIGE HAND GOTTES *

Rev.: Berolina kniet zum Dankgebet im Profil nach links vor ihrem an einen Baum gelehnten Wappenschild. Links unten: G. LOOS D. Im Abschnitt: VON DER PLAGE ERLÖSET | D. 30 IANUAR | 1832. Umschrift um das Ganze: BEI DEM HERRN IST GNADE UND VIEL ERLÖSUNG ·

Silber. Dm. 37.

Breslau.

*3. 1831/32. Die Darstellungen der vorigen Medaille wurden wiederholt für Hamburg und Breslau; verschieden sind nur die Wappen und die Worte in den Abschnitten.

Av.: Abschnitt: BRESLAU VON DER ASIAT. | CHOLERA ERREICHT | D. 29 SEPT. 1831.

Rev.: Abschnitt: VON DER PLAGE ERLÖSET | D. 4 IANUAR | 1832.

Hamburg.

*4. 1831/32.

Av.: Abschnitt: HAMBURG VON DER ASIAT · | CHOLERA ERREICHT | D · 8 OCT · 1831 ·

Rev.: Abschnitt: VON DER PLAGE ERLÖSET | D · 22 IANUAR | 1832 ·

Wien.

*5. 1831/32.

Av.: Ansicht von Wien; über der Stadt schwebt ein Engel mit Schwert und Giftbecher, links vorn sitzt, an ein Piedestal gelehnt, eine trauernde Frau mit Mauerkrone. Auf dem Piedestal: WIEN | VON DER | CHOLERA | ERREICHT | D: 14: SEP: | 1831 · | Umschrift: HERR DEIN WILLE GESCHEHE ·

Rev.: Stehendes Weib mit dankender Geberde, nach links gewendet vor einem brennenden Altar; auf letzterem: ERLÖST | D · 1 · APRIL | 1832 · Links über einem Hügel die aufgehende strahlende Sonne, rechts hinten die Stadt Wien. Umschrift: BEI DEM HERRN IST GNADE · Im Abschnitt: WIEN BEY F · MACHTS ·

Silber. Dm. 44.

Paris.

*6. 1832.

Av.: Aeskulap mit der Linken einer kranken Mutter den Puls fühlend, während er mit der Rechten den Tod abhält, einen am Boden liegenden Kranken zu ergreifen. Grosse Gruppe von 9 Figuren. Neben rechts: E · ROGAT 1832: Im Abschnitt: INVASION DU CHOLÉRA | EN 1832 ·

Rev.: Ein starker Eichenkranz um ein leergelassenes Feld.

Bronze-Medaille. Dm. 84.

Amsterdam.

*7. 1832.

Av.: Das von 2 stehenden Löwen gehaltene gekrönte Wappenschild der Stadt Amsterdam. Umschrift: CHOLERA-COMMISSIE TE AMSTERDAM · Im Abschn.: MDCCCXXXII · | I · P · SCHOUBERG F ·

Rev.: Als Umschrift: BLIJK VAN ERKENTENIS · Darunter: AAN · In dem freien Felde ist dann der Name zu graviren, z. B. auf unserem Exemplare J · B · | KLONTRUP J^{R} · |

Silber. Dm. 30.

Brüssel.

*8. 1832.

Av.: Kopf mit Eichenkranz im Profil nach links. Umschrift: LEOPOLD PREMIER — ROI DES BELGES· Unten klein: BRAEMT F·

Rev.: Unter einem Kranze: RECONNAISSANCE | PUBLIQUE· Umschrift: SERVICES RENDUS PENDANT LE CHOLÉRA · 1832 ·

Dm. 37.

Livorno.

*9. 1835.

Av.: Umschrift: LA VEN · A-C · DELLA MISERICORDIA DI LIVORNO· In einem Kranze aus einem Oliven- und einem Cypressenzweige mit einer Schleife zusammengebunden: AI | CAPIGUARDIA | FLAGELLANTE | IL | CHOLERA | 1835· Darunter klein: G · N· d. h. Giorgio Nesti.

Rev.: IDDIO | ALL' OPERA PROCELLOSA | SORTILLI | PER FARE PRODIGIO | DI MISERICORDIA | SALVANDOLI |

Bronze-Medaille. Dm. 52.

Paris.

*10. 1848.

Av.: Die Muttergottes auf der Weltkugel, im Feld Sterne, oben Strahlen. Umschrift: MEDAILLE ANTI CHOLÉRIQUE, unten ganz klein: 1848·

Rev.: Um einen Stern: ANTI | CHOLÉRIQUE· Darunter ganz klein: GARNIER À PARIS· Umschrift: MÉTAL COMPOSÉ · PRÉSERVATIF· Darunter ganz klein· DÉPOSÉ·

Gehenkeltes Amulet. Dm. 18.

Rom.

*11. 1854.

Av.: Pius IX., Büste im Käppchen, Profil nach rechts: PIVS IX · PONTIFEX — MAXIMVS ANNO · X · Unten klein: P · GIROMETTI F·

Rev.: Von rechts her, und gefolgt von 2 Priestern und einem Officier, tritt der Papst segnend an das Bett eines Kranken. Zu dessen Häupten kniet links ein Priester. Im Abschnitt: AD SANCTI SPIRITVS LVE LABORANTES | INVISIT XI · KAL · SEPT · | A · MDCCCLIV ·

Dm. 44.

*12. 1854.

Av.: Profilbüste des Papstes nach links. PIVS IX · — PONT · MAX · Unten klein: NIC · CERBARA F · Das Ganze umgeben von einem schweren Eichen- und Lorbeerkranz.

Rev.: PIVS IX · PONT · MAX · | PATER INDVLGENTISSIMVS | SENATORI ET CONSERVATORIBVS VRBIS | ANNO · REP · SAL · MDCCCLIIII | LVE ASIANA IN VRBEM GRASSANTE | DE CIVIVM INCOLVMITATE | PRAECLARE MERITIS | VINCENTIO COLONNA V · S · SENATORI | M · ANTONIO BORGHESE IOACHIMO ALBERTAZZI | IOANNI B · GVGLIEMI IOSEPHO FORTI | ALOISIO ANTONELLI IOSEPHO PVLIERI | FERDIN · DE CINQVE IGNATIO AMICI | CONVERSATORIBVS · |

Prächtige Bronze-Medaille. Dm. 82.

Brüssel.

*13. 1866.

Av.: Eine weibliche Figur mit maurerischen Emblemen, einen Zweig in der erhobenen Rechten, einen Kranz in der herabhängenden Linken, steht neben einem lodernden Altar, an dem 2 ovale Schilde lehnen, auf 3 Stufen. Links an denselben B, weiter unten Kelle, Zirkel etc. Links eine Säulen-Basis, auf welcher ein J ·, unten ein Zweig — rechts eine desgleichen mit B und einem blühenden Rosenzweig an deren Fusse. Umschrift: R ∴ ▭ DES AMIS PHILANTHROPES · Im Abschn.: OR ∴ DE BRUXELLES ·

Rev.: In einem Pentagramm, über welches 2 durch eine Schleife verbundene Zweige sich hinlegen: LA | ▭ ∴ | AU T ∴ C ∴ F ∴ | Jules ANSPACH | SON VÉN ∴ M ∴ | POUR SA CONDUITE | VRAIMENT MAÇ ∴ | PENDANT L'ÉPIDÉMIE | DE L'AN DE LA | V ∴ L ∴ | 5866 ·

Maurerische Medaille. Bronze. Dm. 48.

VI. Medaillen auf Hungersnöthe.

Rom.

*1. 1508.

Av.: Büste des Papstes im Profil nach rechts: IULIVS LIGVR PAPA SECONDVS·

Rev.: Die Abundantia mit Aehren und Füllhorn nach rechts schreitend. ANONA — PVBLICA·

Dm. 35.

Bologna.

*2. 1529.

Av.: Ein Bischof, in der Rechten eine Kirche, unten Wappenschild. Umschrift: COGENTE · INOPIA · — · REI · FRVMENTARIE ·

Rev.: Oben kleiner liegender Löwe, darunter: EX COLLATO · | AERE · DE · REBVS | SACRI · ET · PRO | PHANIS · IN · EGENO | RVM · SVBSIDIVM | · M · D · XXIX · | · BONONIA · | *

$^1/_2$ Scudo. Dm. 34.

Rom.

*3. 1591.

Av.: Stark reliefirte Büste des Papstes im Profil nach rechts. GREGORIVS · — · XIIII · PON · MAX · Am Schulterabschnitt: NIC · BONIS ·

Rev.: Abundantia, stehend, von vorn gesehen, aber nach links blickend, mit Aehren und Füllhorn. DIEBVS · FAMIS · SATVRAB ·

Dm. 33.

*4. 1641.

Av.: Büste im Profil nach rechts. Umschrift: VRBANVS · VIII · PON · MAX · A XIX · Darunter klein: G(aspar) · M(olo) · Um das Ganze 2 Lorbeerzweige, auf welchen Bienen.

Rev.: Ansicht der Kornspeicher. Umschrift: · VBERIORI · ANNONAE · COMMODO · Darum 2 Lorbeerzweige.

Dm. 46.

5. 1671.

Av.: Brustbild des Papstes im Käppchen: CLEMENS · X · PONT · MAX · ANN · II · Unten MDCLXXI und EQ · HIER · LVCENTI ·

Rev.: Die allegorischen Figuren der Clementia und Liberalitas. Umschrift: MALVM MINVIT · BONVM AVGET ·

Scudo. — Madai 676.

6. 1672.

Av.: Die Büste des Papstes Clemens X.

Rev.: Ein Seehafen mit Schiffen: VT · ABVNDETIS · MAGIS · Unten: MDCLXXII ·

Madai 677.

*7. 1690.

Av.: Brustbild des Papstes: ALEXAN : VIII · PONT : M : A : I :

Rev.: Aehren und zwei pflügende Ochsen: RE · FRVMENTARIA · RESTITVTA · Im Abschnitt: CIↃIↃ—CXC; darunter das Wappen des Papstes.

Testone. — Madai 690.

Hamburg. (?)

*8. 1694.

Av.: Ein Mann nach links gehend, auf der Schulter den Sack, aus dem der Teufel das Korn fallen macht. Umschrift: * DU KORN IUDE · Im Abschnitt: THEURE ZEIT | 1694 ·

Rev.: Ein wagrecht stehender Scheffel; auf dessen innerer Seite liest man: WER · KORN · INHELT · DEM | FLVCHEN · DIE · LEUTHE · und darunter auf der äusseren: ABER · SEGEN · KOMT · | ÜBER · DEN · SO · | ES · UER · KAUFT · Im Abschnitt: SPRUCH · SALOM · | XI · 26 ·

Silber. Dm. 42.

Schlesien.

9. 1694.

Av.: Der Kornjude nach rechts gehend, auf der Schulter den Sack, aus dem der Teufel das Korn fallen macht. Oben: DU KORN JUDE · Im Abschnitt: THEURE ZEIT · | 1694 ·

Rev.: Ein aufrechtstehender Scheffel; links auf der inneren Seite: WER | KORN | INHELT | DEM | FLVCHEN | DIE | LEU- | THE; auf der äusseren Seite: ABER | SEGEN | KOMT | ÜBER | DEN | SO ES | VER- | KAVFT · Im Abschnitt: SPRICH SALOM : | XI · 26 ·

Kundmann p. 37.

10. 1695.

Av.: Der Jude an einem Baum hängend, auf dessen Zweig der Teufel hockt; hinten links eine Scheune, in deren Thor man liest: LVC · | 12 · | , — rechts ein Weinberg. Umschrift: DU KORNJUDE · Im Abschnitt: WOLFEILE ZEIT · | 1695 · |

Rev.: Ein wagerechtstehender Scheffel; auf der inneren Seite desselben: SPRVCH · SALOMO · | XI · V · 26 · | , auf der äusseren: ABER SEGEN | KOMPT UBER DEN | SO ES VERKAUFFT · Umschrift: WER KORN INHAELT DEM FLUCHEN DIE LEUTHE ·

Kundmann p. 38.

Rom.

*11. 1704.

Av.: Brustbild des Papstes mit der Tiara, im Profil nach rechts. CLEMENS · XI · — · PONT · OPT · MAX · Am Schulterabschnitt: HERMENIGILDVS · und darunter: · HAMERANVS ·

Rev.: Die vielfenstrige Façade eines Gebäudes, diverse Gruppen im Vordergrund. Darüber in einer Cartouche: ADDITO · ANNONAE | PRAESIDIO · Im Abschnitt: 1704 ·

Dm. 50.

Schlesien.

*12. 1736.

Av.: Gebäude unter Bäumen — überschwemmt; aus Wolken fallen Ströme von Regen. Umschrift: O! WIE VIEL! Im Abschnitt: SCHLESISCHE | WASSERS-NOTH | 1736.

Rev.: Auf einer Anzahl Garben liegt ein Dreschflegel, links einige Körner. Umschrift: O! WIE WENIG! Im Abschnitt: SCHLESISCHE | HUNGERS-NOTH | 1736.

Silberne Medaille. D. 31.
Von Joh. Knittel in Breslau. — Kundmann p. 100.

13. 1736.

Av.: Die Arche Noah auf den Wassern, über ihr die Taube. Umschrift: BEFIEHL DEM HERRN DEINE WEGE. Im Abschnitt: UND HOFFE | AUF IHN | ·

Rev.: Noah's Dankopfer. Umschrift: ER WIRDS WOHL MACHEN · Im Abschnitt: 1736 ·

Von Knittel. — Kundmann p. 100.

*14. 1737.

Av.: Stehende Figur des Todes, dessen Sense eine aus Wolken ragende Hand festhält. Umschrift: DVRCH GOTTES ALLMACHT ABGEWANDT· Im Abschnitt: IN SCHLESIEN | 1737·

Rev.: Ein Schnitter mit der Sense bei einem reichen Aehrenfelde. Oben das Auge Gottes in Strahlen. Umschrift: VND NEUER SEGEN ZVGESANDT· Im Abschnitt: IN SCHLESIEN | 1737·

Silberne Medaille. Dm. 22.
Kundmann p. 102.

15. 1737.

Av.: Reiches Kornfeld, vor demselben eine volle Garbe; links W·, rechts K· Umschrift: DAS HAT GOTT GETHAN· Im Abschnitt: ZVM PREISE GOTTES | VOR REICHEN ZUWACHS | IN SCHLESIEN·1737:

Rev.: Auf einem Fluss 2 mit Korn und Fässern beladene Schiffe, von denen das erste ausgeladen wird; rechts vorn ein vierspänniger Lastwagen. Umschrift: DAS HABEN MENSCHEN· Im Abschnitt: ZU EHREN DER BRESLAUISCH: | KAUFMANNSCHAFT | VOR REICHE ZUFUHR | NACH SCHLESIEN·

Silber. Dm. 30.
Kundmann p. 101.

Rom.

*16. 1760.

Av.: Büste im Profil nach links. CLEMENS XIII·—PONT· M·A·II· Am Schulterabschnitt klein: O(tto)·H(amerani)·

Rev.: Ansicht der Speicher, vorn Gruppen mit Säcken etc. VT·— COMEDANT·PAVPERES·POPVLI· Im Abschnitt: MDCCLX·

Dm. 33.

Schlesien.

*17. 1770/71.

Av.: Links eine leere Tenne bei strömendem Regen; nach rechts 4 Männer, einer am Boden liegend, 2 betend: WO NEHMEN W·BROD· Rechts unten: Œ(xlein)· Umschrift: NACH ALLGEMEINEN KLAG UND WEINEN· Im Abschnitt: 1770·1771·

Rev.: Fluren mit reichen Aeckern, Aerntewagen nach der fernen Stadt fahrend, darüber die Sonne. Umschrift: LÆST GOTT DIE GNADEN SONNE SCHEINEN. Im Abschnitt: 1772·

Silber. Dm. 38.

Sachsen.

*18. 1770/72.

Av.: Auf einem 4eckigen Piedestal eine 4seitige Pyramide, an der ein Schild mit den Kurschwertern und dem Rautenwappen. *Sach—sens* | *Denckmahl* | *1 Pfd.—Brod 2 gr.*

Rev.: Die | *Sächsche* | *Theurung* | *1 Sch: Korn · 13 · Th:* | *1 Sch. Weitze · 14 · Th:* | *1 Sch. Gerste . 12 · Th:* | *1 Sch. Haber . 6 Th:* | *von 1770 · bis* | *1772 ·*

Zinn. Dm. 46.

*19. 1771/72.

Av.: Aehnliche Darstellung wie oben, zu den Seiten der Pyramide: Sach—sens | Denkmahl | 1771—1772 | An der Basis: C · G · R · U · Umschrift: „Große Theurung — Schlechte Nahrung."

Rev.: im | Gebürge golt: | 1 Sch: Korn · 13 Th. | 1 · Sch: Waitzen · 14 · Th. | 1 Sch: Gerste · 9 · Th. | 1 · Sch: Haber · 6 · Th. | 1 Pfd: Butter · 8 · gr. | 1 · Pfd: Brod 2 gr. |

Zinn. Dm. 44. Leidliche Arbeit.

*20. 1771/72.

Av.: Aehnliche Darstellung: *Sach—sens* | *Denck—mahl ·* | *1771 ·—1772 ·* | Umschrift: *Grose Theurug—Schlete* (sic!) *Nahrung ·*

Rev.: Dieselbe Schrift wie oben, nur in Cursiv und in der letzten Zeile: *1 Pfd. Brodt 2 ·*

Zinn. Dm. 46. Roher Guss.

*21. 1771/72.

Av.: Ein links aus Wolken ragender Arm hält eine Ruthe, rechts ein entlaubter Baum. Umschrift: „Gottes Hand Schlägt das Land."

Rev.: Große | Theurung: | 1771 : 1772 | 1 · Sch: Korn · 15 Th. 1 · Sch: Waitzen · 16 · Th. | 1 · Sch: Gerste · 12 · Th. | 1 · Sch: Haber · 6 · Th. | Dreßdner Maas | 1 Pfd. Brod · 2 gr.

Zinn. Dm. 45.

*22. 1772/73.

Av.: Nach | der grosen | Hungersnoth | gab uns Gott | das liebe Brod | 1772.

Rev.: 1773 | 1 Sch: K: 2 Th | 1 Sch: W: 3 Th | 1 Sch: G: 1½. Th | Dreßdner Maas | 1 Pfd: B: 4 Ꝑ. | Umschrift: An Gottes Seegen, ist alles gelegen.

Vergoldete Zinn-Medaille. 40 mm.

Thüringen. (?)

*23. 1771.

Av.: Ein schwebender Engel mit der Sense; er bläst mit der Rechten in eine Trompete, auf deren Fahnentuch ANNO | 1771 | Unten Wasser, in dem Menschen, Boote etc. Perlrand. Umschrift: VOR KRIEG · WASSER · U · HUNGERSNOTH BEHUT UNS LIEBER HERRE GOTT.

Rev.: Auf einem Pult unter dem Auge Gottes ein aufgeschlagenes Buch, in dem man liest: WO DEIN GESETZ | NICHT | MEIN | TROST | | GEWEST | WARE SO | WARE ICH | VERGAN | GEN IN | ? ? V, 92. Im Abschnitt: GROSE THEURUNG | SCHLECHTE NAH | RUNG |

Zinn. Dm. 39. Roher Guss.

Altenburg.

*24. 1771/72.

Av.: Auf einem 4seitigen Piedestale eine 4seitige Pyramide mit dem Rautenschild. Umschrift: *Grose : Theurung : — keine : Nahrung :* Zu beiden Seiten der Pyramide: *Alten — burgs | Denck — mahl | 1771—1772 | gest — orben | 30—708.*

Rev.: Die | Altenburgschs | Theurung | 1 Sch: Korn 19 Th: | 1 Sch: Weize 20 Th: | 1 Sch: Gerste 16 Th: | 1 Sch: Haber 7 Th. | 1 Pfd. Brod: 20 P.

Zinn-Guss. — Dm. 44.

Wettenhausen.

*25. 1771.

Av.: Dankbares Volk mit Kränzen um eine Büste Maria Theresia's. An deren Piedestal steht: EGO | MITTAM | VOBIS | FRUMEN | TUM | IO · 2 · V · 19 · Umschrift: M · THERES · AUG · VID · BENEFACTRICI NOSTRAE · Im Abschnitt: A · KÖNIG ·

Rev.: Fluss mit Getreidebarken, welche man eben ausladet. Im Hintergrunde Stadt. Umschrift: FACTA EST QUASI NAVIS DE LONGE | PORTANS PANEM · PROV · 31 · C · 14 · | Im Abschnitt: IN MEM · BENEFICII TEMP · FAMIS | ACCEP · AUGUSTINUS PRELAT · | CANONICI LATER · ET POP · | WETTENHUSANUS | 1771 ·

Silber. Dm. 35.

Weimar.

*26. 1771.

Av.: Befestigte Stadt mit Thürmen, über der ein Engel schwebt; vorn Leute. Umschrift: VERDERBE ES NICHT — ES IST EIN SEEGEN DRINNE · Im Abschnitt: AUF VER-

ORDNUNG EINER | HOHEN K · DER STADT WEI | MAR WIRD DER ARM | UTH GEHOLFFEN · D · 1 · MART · 1771 · |

Rev.: Die bekannte Pyramide, bekränzt, steht auf einem Kornfeld, links ein Weib, rechts Merkur, links in der Ferne ein Säemann; oben eine Hand mit einer Giesskanne, aus Wolken hervorragend und das Feld rechts giessend. Umschrift: LAS NICH DIE BRÜDER — GOTT GIEBTS WIEDER ·

Miserabler Zinnguss. Dm. 40.

*27. 1772. Variante nach derselben Zeichnung von noch geringerer Arbeit. Ausser abweichender Orthographie und Abtheilung der Worte trägt der Avers im Abschnitt das Datum: DEN . 12 . | MERZ . 1772.
Dm. 41.

Deutsches Reich.

*28. 1771/72.

Av.: Auf einem 4eckigen Piedestal eine mit Schnörkeln eingerahmte Cartouche, oben mit dem doppelköpfigen Adler, und die Worte enthaltend: „An | denken | des | Reichs." Zu den Seiten: 1771—1772. Umschrift: „Große Theurung — Schlechte Nahrung."

Rev.: Schwebende Figur mit geflügelten Füssen, in der Rechten einen Anker, in der Linken eine Palme. Darunter: In Reich golt | 1 Pfd: Brot 12 Kr: | 1 Pfd: R · Fleisch 10 R · | Umschrift: Wen Große Noth — Hofnung zu Gott.

Zinn. Dm. 46. Leidliche Prägung.

Thüringen. (?)

*29. 1772.

Av.: Auf einem aufrecht stehenden Scheffel liest man auf der inneren Seite links: WER | KORN | INNE | HAELT, | DEM | FLUCHEN | DIE | LEU | TE; auf der äusseren rechts: ABER | SEGEN | KOMT | UEBER | DEN, | DER ES VER: | KAUFT | Im Abschnitt: SPRUCH SALOMO XI · V · 26 · | Perlrand.

Rev.: Mann nach rechts gehend, einen Sack auf der Schulter, auf dem ein Teufel hockt, das Korn herauszettelnd; links ein Weib, die Hände erhoben. DV KORNIVDE — DEN 12 MERTZ. Im Abschnitt: THEURE ZEIT | 1694 1772.

Zinn. Dm. 39.
Thüringer Machwerk wie No. 26.

* * *

*30. 1772. Jeton von C. Reich in Fürth.

Av.: Ein Mann, auf der linken Achsel einen Sack, in der Rechten einen Stab, schreitet auf den rechts gähnenden Höllenrachen zu; er blickt hinter sich, weil ein auf dem Sack sitzender Bock denselben zerrissen hat, dass das Korn herausfällt. Umschrift: KORN IVD VER — ZWEIFEL V · GEH ZVM Im Abschnitt: THEVRE ZEIT | 1772 ·

Rev.: 1771 | HAT KOST | 1 PF · BROD 12 K | 1 PF · S · FLEIS · 10 · | 1 PF · R · FLEIS · 8 · | 1 MZ · F · MEHL 5 G · | 1 PF · BVTTER 30 K | 1 MS · BIER 3 K · | FARNB 4 K · | Im Abschnitt: I · C · REICH | FÜRTH ·

Zinn. Dm. 29.

*31. 1771/72. Jeton von Reich.

Av.: Wage, in der linken Schale „12 K ·“, in der Rechten „1 PF ·“ Dabei ein Anker mit einer an denselben gefesselten auffliegenden Taube. Links I · C · REICH · und darunter FÜRTH · D · 1 · F · | 1772 · Umschrift: 71 · KLEIN BROD · 72 · GROS NOTH · HOFNUN · FREYE SICH IN GOTT ·

Rev.: Eine geflügelte Kugel. Darüber: FORTUNA IN | DER KAMMER · | Darunter: BRINGT GROSE | NOT U : IAMMER. Im Abschnitt: DANTES · Oben eine kleine Kugel mit 2 Flügeln und als Umschrift: FORTUNA IN DER WELT · BRINGT NAHRUNG BROD UN GELD ·

Kupfer. Dm. 25.

*32. 1771/72.

Av.: Wage, Anker mit Taube wie oben. Selbe Umschrift etc.

Rev.: Aus einem sich über ein Kornfeld spannenden Regenbogen deutet eine Hand auf die Worte: ICH WILL | EUER GOTT | SEIN ZU SEGNEN | Darunter: U : IHR MEIN VOLCK · Im Abschnitt: DANTES ·

Messing. Dm. 24.

*33. 1771/72. Jeton von Reich.

Av.: Links steht Joseph, mit der Rechten auf einen links sichtbaren Sack „KOR“ deutend, die Linke gegen die rechts knienden Brüder erhebend. Aus seinem Munde gehen die Worte: GOTT SEGNE EUCH · Umschrift: LIEB DIE BRÜDER GOTT GIBTS WIEDER · Im Abschnitt: DANTES | 1772 · |

Rev.: 1771 | HAT KOST · | 1 PF · BROT · 12 · KR · | 1 PF · SCHW: FLEI · 10 · K · | 1 PF · RIND · FLEIS · | 8 · K · | 1 · METZ: FEI · MEHL · 5 · GUL · | 1 PF · BUTTER · 30 · K · | 1 MAS BIR · 3 K : FA · 4 · K · | 1 SIM · GERST · 96 · GUL | U : KEI : NAHRUNG · | IO : C · REICH · IN | FÜRTH · |

Dm. 29.

*34. 1771; 1775.

Av.: In einem von romanischen Bogen überdeckten Raume steht links Joseph, rechts knien 9 Brüder. Umschrift: DIE THEURUNG IM LAND MACHT JOSEPH BEKANT· Im Abschnitt: MDCCLXXV | * * |

Rev.: 1771 | HAT GEKOST | 1 · PFD: BROD · 12 · KREU · | 1 · PFD: RIN : FLEISCH 8 · KR · | 1 · METZ FEI MEHL 5 · GU · | 1 SIMRA KORN 80 · GU · | WAIZ 82 · GERSTE 96 · GU · | 1772 · D · 1 · JUL · IN SAXEN | 1 · SCHEFL WAIZ 28 · TH · | KORN 22 · GERST · 20 · T · | U : KEIN NAHRUNG | GROSE NOTH | *

Gravirte Medaille von sehr feiner Ausführung; beide Seiten in geschweiftem, vertieftem Rahmen. Die Zeichnung des Averses ähnlich No. 33.

Silber. Dm. 44.

* * *

Erfurt.

*35. 1816/17.

Av.: Ein nach links schwebender Engel über einem reichen Aehrenfeld. Auf einem Bande: VERTRAU AUF GOTT S : SEEGEN BL : N : AUSEN :

Rev.: In einem Perlenkranz unter der Sonne: *Im Jahr 1816 u. 17. | war so eine schreckli: | grose Theurung | das in u. bei Erfurt ein | Malter Weitzen 110 Th. | Korn 86 Th. Gerste 68 Th. | Hafer 28 Th. eine Metze | Kartoffeln 15 gr. 1 Pfd. | Brod 2 gr. hat | gekostet.*

Zinn. Dm. 51.

Fulda.

*36. 1816/17.

Av.: Stehende Figur der Religion, mit der Linken ein grosses Kreuz haltend; in der Rechten hält sie zwei Zweige über einen Altar, auf dem ein Brod liegt. An dessen Sockel: BROD | UND | FRIED · | Umschrift: HERR! WEND AB DIE HUNGERSNOTH! GIB UNS UNSER TÄGLICH BROD! Im Abschnitt: I · D ·

Rev.: Ueber dem Fuldaer Wappen im Felde: DER | GROSSEN | THEUERUNG | IN | FULDA—VOM JAHR | 1816—1817. Umschrift: 1 · MLTR KORN 34 FL · 1 · M · WAITZEN 45 FL. 1 · M · GERSTEN 29 FL · 1 M · HAFER 16 FL · | 1 MAS KARTOFFEL · 1 FL · 24 X ·

Zinn. 50 mm.

Weimar.

*37. 1816/17.

Av.: Links Wolken, rechts die Sonne. DU SUCHTEST DAS LAND | HEIM MIT THEURUNG | DAS IN WEIMAR 1 SCHEFL WAI- | ZEN 11 TH : 12 : GR : KORN 8 TH: 4 GR : | GERSTE 6 Th : 4 GR: HAFER 3 TH: | 6 GR: WICKEN GERSTE 6 TH : EIN | PFUND BROD 2 GR: EIN PFUND | BUTTER 14 GR : EIN KORB | KARTOFFELN 1 TH : 20 GR: | KOSTETE IM JAHR | 1816 U· 1817 | G · S · | Umschrift: GOTT DEINE GÜTE REICHT SO WEIT — — SO WEIT DIE WOLKEN GEHEN · Um das Ganze ein Sternenkranz und verschiedene Linien.

Rev.: Aehren zwischen Eichen und Palmenzweig. Darüber eine Krone. Darinnen: DER H—ERR HAT—GROS—SES A—N UNS—GETHAN· Umschrift in 2 Linien: DU KRÖNEST DAS JAHR MIT DEINEM GUT UND DIE AUEN STEHEN DICKE || MIT KORN, DAS MAN IAUCHZET UND SINGET | Um das Ganze Perlring und verzierte Linien.

Zinn. Dm. 60.

* * *

*38. 1816/17. Jeton von J. Th. Stettner in Nürnberg.

Av.: Eine aus Wolken herabhängende Wage, in der einen Schale ein Gewicht, in der andern ein Brod; darunter ein Anker auf Aehren. Umschrift: VERZAGET NICHT —GOTT LEBET NOCH· Unter dem Wagbalken: 1 MAAS BIER | $8^1/_2$ KR: Unter den Schalen: 1 PFD. 3 L — 12 KR. Im Abschnitt: 1816 · U : 1817 | L.

Rev.: Eine sitzende Mutter mit 2 Kindern; links: *Stettner* Umschrift: O GIEB MIR BROD MICH HUNGERT. Im Abschnitt: IETTON.

Messing. Dm. 33.

*39. 1816/17. Aehnlicher Jeton; mit folgenden Varianten.

Av.: VERZAGET NICHT GOTT—LEBET NOCH. Ferner: 1 MAS BIR. — Im Abschnitt fehlt der Buchstaben L.

Rev.: Der Name Stettner fehlt. Die Schrift ist durch den Kopf getheilt: O GIEB MIR — BROD MICH HUNGERT.

Messing. Dm. 35.

*40. Aehnlich, mit folgenden Varianten.

Av.: 1 MAS BIER | $7^1/_2$ K· Unter den Schalen: 1 PFD · 8 L · — 16 KR· Im Abschnitt fehlt das L·

Rev.: Rechts sitzt eine Frau mit 2 Kindern, welcher eine von links kommende Frau ein Brod reicht. Gleiche Umschrift, im Abschnitt: D. Auf dem Rande ist ein Lorbeerkranz geprägt.

Kupfer. Dm. 33.

* * *

Koburg.

*41. 1817.

Av.: Fortuna mit Füllhorn und geflügelten Füssen auf einer Kugel stehend. Links unten sehr dürftige, rechts reiche Aehren. Zu den Seiten liest man: *Nahr: Noth | u: wenig Brod | Gott gibts dop | pelt wieder.* Oben: *Denke · Dulde · Hoffe ·* Im Abschnitt: *1816 · — 1817 ·*

Rev.: Im Jahr | 1817 bis zur Ernde | kostete in Coburg |
ein Simr Korn 20 Gulden
„ „ Waitzen 20½ . .
„ „ Gerste 18 . .
„ „ Hafer 8 . .
1 Metz Kartofl 6 Batz:
1 Pfd. Rindfleisch 3 . .
1 Pfd. Schweinfl. 3⅕ . .
1 Pfd. Butter 8 . . .
W. P.

Zinn. Dm. 52.

Würtemberg.

42. 1817.

Av.: Die Pyramide wie auf No. 18, 24 etc.; an derselben ein ovales Schild mit den 3 Hirschgeweihen. Am Piedestal: P · D · B · Zu den Seiten: *Würtem—bergs | Denk—mal | v. Jahr — 1817.* | Umschrift: *Grosse Theurung — schlechte Nahrung.*

Rev.: es galt: | 1 Sch: Dünk. 40 Fl. | 1 Sch: Gersten 52 · Fl: | 1 Sch: Haber 24 · Fl: | 1 · Sri: Erbsen 7 · Fl. 1 Sri: | Kartofflen 4 · Fl: 1 Pfd. Brod | 18 · Kr · 1 Pfd. Ochs.Fleisch 16 · Kr. | 1 Pfd. Schw:Fleisch 18 · Kr. 1 Pfd. | Butter 44 · Kr. 1 · Pfd. Schw | Schmalz 1 · Fl: 4 Kr.

Zinn. Dm. 43.

*43. 1817.

Av.: Eine nackte Fortuna mit Schleier auf einer Kugel, zu beiden Seiten: *Leiden—Freuden | Alles kömt — vom Herrn.* Umschrift: *Nach Regen folgt Sonnenschein.*

Rev.: In einem Ring von Sternen und je 4 Punkten: *Im Jahr 1817* | *war die Theurung* | *im Königreich Würtem:* | *berg so gros dass* | *1 Schfl. Dinkel 40 Fl.* | *Gersten 52 Fl.* | *Haber 24 Fl.* | *1 Sri Erbsen · 7 · Fl. 1 Sri* | *Kartoff 4 Fl. u. 1 Pfd.* | *Brod 18 Kr. galt ·* | IMO ·
Zinn. 45 mm.

Barmen.

*44. 1846/47.
Av.: Das Wappen der Stadt, darunter: 1846 : 47 | *BARMEN* | Umschrift: FUER NOTHLEIDENDE MITBUERGER.
Rev.: 2 gekreuzte Kornähren, darunter: GÜLTIG FÜR | 1 BROD | .
Zinn. Dm. 32.

Erfurt.

*45. 1846/47.
Av.: Die Sonne über Ackergeräth, Garbe etc. In 2 Kreisen: LOBT GOTT DER GNÄDIG AN UNS DENKT | UND NEUEN ERNTESEGEN SCHENKT.
Rev.: *Theurung im Jahre* | *1846 u. 47* | *in Erfurt* |
e. Malter Weizen 86 Thlr. |
„ „ Roggen 80 „ |
„ „ Gerste 57 „ |
„ „ Hafer 29 „ |
e. Metze Kartoffeln |
16 Sg. |
Zinn. Dm. 42.

Erfurt und Arnstadt.

*46. 1846/47.
Av.: Oben das Auge Gottes. *Im Theurungs-* | *Jahre 1846 bis 1847* | *in Erfurt* |
e. Malter Weizen 80 Thlr.
„ „ Roggen 76 „
„ „ Gerste 56 „
„ „ Hafer 24 „
e. Metze Kartoffeln $12^1/_2$ *Sg.*
e. Pf. Brod $2^1/_2$ *Sg.*
Rev.: *In Arnstadt* | *der Preis* |
e. Maas Weizen $16^1/_2$ *Thlr.*
— Gemangkorn $15^1/_2$ *Thlr.*
— Roggen $15^1/_2$ *Thlr.*
— Gerste $11^1/_2$ *Thlr.*
— Hafer $5^1/_8$ *Thlr.*
e. Metze Kartoffeln 5 Sg.
Umschrift: *Lobt Gott, der gnädig an uns denkt; und neuen Erntesegen schenkt.*
Zinn. Dm. 57.

Halle.

*47. 1846/47.

Av.: Mann und Frau mit 2 bittenden Kindern um einen Tisch, auf dem 2 leere Schüsseln und ein leerer Korb. Links am Boden: H · LORENZ F · Umschrift: UNSER TÄGLICH BROD GIEB UNS HEUT! Im Abschnitt: SPR · SALOMONIS | 11 V · 26 · In einem getrennten Rand um das Ganze 2 Zeilen Umschrift: * THEURE ZEIT * 1 SCH · WEIZEN 5 TH · 20 SGR · KORN 5 TH · GERSTE 3 TH · 22 SGR · 6 PF · | HAFER 2 TH 5 · SGR · KARTOFF · 2 TH · 1 PFD · BROD 2 SGR · * HALLE 1846—1847 *

Rev.: Ein geschmückter Erntewagen wird vom Felde heimgeleitet, vorn ein dankender Bauer mit Weib und Kind. Auf einem Bande oben: NUN DANKET ALLE GOTT · — unten: ERNDTESEEGEN 1847 | PSALM 50 V · 15 ·

Zinn. Dm. 43.

Sachsen.

*48. 1846/47.

Av.: Die über einander gelegten Profilköpfe nach rechts: FRIEDRICH AUGUST KÖNIG VON SACHSEN * MARIE KÖNIGIN VON SACHSEN · Am Halsabschnitt: KRÜGER ·

Rev.: Unter einem romanischen Doppelbogen links: ein Mann einem knienden Bettler ein Gewand umhängend; darüber: WAS IHR | GETHAN HABT | EINEM UNTER DIE- | SEN MEINEN GE- | RINGSTEN BRÜDERN; — rechts: ein Bäcker hinter seinem Ladentisch, einem davorstehenden Knaben ein Brod reichend, darüber: DAS HABT | IHR MIR GE- | THAN · MATTH · 25 · | V · 40 · Im Abschnitt: $18\frac{46}{47}$ ·

Bronze. Dm. 49.

Gotha.

*49. 1847.

Av.: Gruppe von Garben, Blumen, Sense, Dreschflegel etc., darunter: *Gotha.* Umschrift: *Nach rauher Stürme Wüthen, scheint goldnes Sonnenlicht.*

Rev.: Oben das Auge Gottes, darunter: *Theurung vom Jahre* | *1847* · | *Weitzen das Mltr.* $19^2/_3$ *Thlr.*
Korn " " $19^1/_3$ *Thlr.*
Gerste " " 12 "
Hafer " " $6^2/_3$ *"*
für 1 Sgr. 15 Lth. Brod.
Kartoffeln d. Korb $1^1/_3$ *Thlr.*

Zinn. Dm. 49.

Schlesien.

*50. 1847.

Av.: 2 betende kniende Figuren; rechts hinten ein Haus unter Tannen, oben das Auge Gottes. Im Abschnitt: UNSER TAEGLICH BRODT | GIEB UNS HEUT | . Umschrift: GROSSE THEURUNG · WENIG NAHRUNG ·

Rev.: Umschrift: IN SCHLESIEN GALT DER SACK ODER 2 PREUS. SCHEFFEL · 1847. Im Feld:

WEITZ: 11 RTHLR.
ROGGEN 10 · „ · ·
GERST: 8 · „ · ·
HAFER 3 · 1/2 „ · ·
ERBSEN 9 · · · ·
KARTOFF · 2 . · ·

Zinn. Dm. 43.

VII. Kometen, Heuschrecken und andere Calamitäten.

Komet von 1618.

*1. *Av.:* Sarg auf Tragbahre, mit einem Kreuztuche verhängt, — darauf liegt Helm und Ritterschwert, daran lehnt eine offne Bibel. Links ein dürrer Baum, darüber ein grosser Komet. Umschrift: BEDROVNG EINES COMETENS. Im Abschnitt: ES WERDEN ZEICH | GESCHE : LV : 21 ·

Rev.: GOTT | GEB DAS VNS | DER COMETSTERN | BESSERVNG | VNSERS LEBENS | LERN · | 1618 · |

Silber. Dm. 27.
Kundmann p. 11.

*2. *Av.:* In einem Kranze der Komet; darunter ANNO · 1618|19 · No :

Rev.: 2 aus dem Wasser hervorragende betende Hände, zwischen Aehren (?) und einem verlöschenden Lichte; darunter: ESA · 42 · Umschrift: WER GOTT RECHT EHRT · KEINS WIRT VERSERT ·

Klippe. — Länge der Seite 25 mm.
Kundmann p. 10.

3. 1618. Klippe von ähnlicher Zeichnung, aber grösser und reicher ornamentirt. Auf dem Revers finden sich die Buchstaben I. S. (Johann Schneider? Münzmeister zu Frankfurt und Erfurt.) Abgebildet in Lersner's Chronik von Frankfurt, Tab. VI, 6.

4. *Av.:* Der Komet; darunter in acht Zeilen: GODT · STRAFTE · DEVTSCHLANT · LANGE · ZEIT · MIT GROSEN · FEVR · PEST KRIG · HVNGER · DER · ZEIT · Umschrift: WAR · EIN · GROSER · COMET · STERN · ALLES · EINE · GROS · RVT · 1618 ·

Rev.: In acht Zeilen: GODT · GAB · FRIDE IM HEILIGEN ROMISCHEN REICH · ANNO 1650 · FERDINANDVS III · ROMI · KEI · Umschrift: DAFVR : DANC : DIE · GANSE · CHRIS : GOT · VATER · SOHN · VNDT HE : GEI :

Thaler. — Madai 5178.

Komet von 1680.

5. *Av.:* Der Sternhimmel mit dem Cometen: ORBITA COMETIC · Oben: ANNO 1680 DIE $\frac{15}{26}$ XBRIS ·
   Rev.: In acht Zeilen: SO GROS DIE RVTHE WAR SO GROS IST DIE GEFAHR FLAMMT NICHT DER BVS-ALTAR · VERGING IM FEBRVAR 1681 ·
   Thaler. — Madai 5179.

*6. *Av.:* Langer Komet zwischen vielen Sternen.
   Rev.: DES COMETEN | ERSTE ERSCHEINUNG | WAR: 1680 · IM NOV · VOR | TAGS, IN DER ♍ HERNACH | ABENDS, D : 16 DEC · DA ER AM | GRÖSTEN · DIE LETZTE · D · 11 · FEB : | 1681 · IM ♉ · DIE GROSTE LANG | DES SCHWEIFS · 76 ° SEIN | LAUF NACH ORDNUNG DER | ZEICHEN · DOCH GE | GEN NORD OST ·
   Zinn; in Schlesien geprägt. Dm. 34. — Kundmann p. 13.

*7. *Av.:* Komet unter Sternen. Im Abschnitt: A° 1680 · 16 · DEC · | 1681 · IAN · |
   Rev.: DER | STERN DROHT | BOESE SACHEN : | TRAV NVR! GOTT | VVIRDS VVOL | MACHEN ·
   Messing; in Schlesien geprägt. Dm. 27. — Kundmann p. 13.

*8. *Av.:* Am Himmel unter vielen Sternen ein grosser Komet; darunter ein mit einem Bahrtuch verhängter Sarg, auf dem ein Helm und ein Schwert liegen. Links ein dürrer Baum. Im Abschnitt: AO · 1680 · | 26 DEC ·
   Rev.: 8zeilige Inschrift: KRIEG | VNGLVCKH | PEST · V · HVNGERS | NOTH | WEND GNÄDIG | AB | HERR ZEBA | OTH ·
   Silberne Medaille. — Dm. 30 mm.

Heuschrecken in Schlesien und Thüringen 1693.

Vier in Schlesien geschlagene Medaillen.

9. *Av.:* Eine grosse Heuschrecke nach links wandernd. Umschrift: EIN DIENER DES HERREN DER HERSCHAREN.
   Rev.: Auf einem zum Theil gemähten Felde lehnt am Stamme eines Baumes eine Tafel, auf der steht: FREMDE | HEVSCHREC | KEN IN | DEVTSCH | LAND | GESEHEN · | M · D · C · XCIII ·
   Von Joh. Kittel. Kundmann p. 231.

*10. *Av.:* Ansicht der Stadt, auf die Hagel und Blitze herabfahren. Vorn ein Stein, auf demselben: 21 | AVG · | 1693 · Darunter: *IRE* · (d. h. Joh. Reinhardt Engelhardt.) Umschrift: GOTT STALTE BRE—SLAV IN DEM IAHR—SO HAGEL ·

Rev.: Saturn mit Sense und Stundenglas, von 2 grossen Heuschrecken begleitet, nach links eilend. Umschrift: ALS HEV: — SCHREC — K — EN · DAR · Im Abschnitt: *IRE* · und auf einem Bande: VI · SEP · MDCXCIII ·

Silber. Dm. 37.

11. *Av.:* Wie oben.

Rev.: Saturn, nach links gewendet, haut mit der Sense ein Ei auf, aus dem 2 Heuschrecken fliegen, eine dritte kriecht unten. Umschrift: ALS HEY—SCHRECKEN DAR · Im Abschnitt: 6 · SEP · A · 1693 ·

Kundmann p. 237.

12. *Av.:* Haus und Baum von Hagelwetter und Blitzen getroffen. Umschrift: DER HOECHSTE LIS SEINEN DONNER AVS MIT HAGEL VND BLIZEN.

Rev.: GROSSES | HAGELWETTER | IN SCHLESIEN | 1693 · 28 · AUG · | GLEICHWIE AUCH | VOR · 100 · JAHREN | 1593 · 15 · IULII ·

Kundmann p. 237.

*13. In Thüringen (?) geprägte Medaille.

Av.: Heuschrecken, unten 2 auf einer Wiese: Denck an das schreckliche Heuschreck Heer, | Daß Dich nicht Gottes Zorn verzehr.

Rev.: Morgenländs. | HEUSCHRECKEN | welche, aus Türkey | kommende, im AVGVSTO | v. SEPTEMBR · 1693 · durch | ungarn, Oestreich, Schlesien | Böhmen, Voigt- und Oster | Land, in Thüringen gezo- | gen, alda sie erfrohrn | und dem Vieh zur | Speise worden.

Silber. Dm. 32.

Harter Winter in Schlesien 1739|40.

*14. *Av.:* Winterlandschaft mit Schlitten und blasendem Wind. WEIL LIEB VND ANDACHT SICH IN KAELT VND EYS VERKEHRT. Im Abschnitt: VOM OCTOB · | 1739 |

Rev.: Ein Mann sitzt auf Felsblock bei einem Pflug, links hinten kahle Bäume. HAT HART VND LANGER FROST DAS ARME LAND BESCHWERT | . Im Abschnitt: BIS IN MAY · | 1740 ·

Von Kittel. — Silber. Dm. 30. — Kundmann p. 243.

Wassersnoth in Holland 1741.

15. *Av.:* Ueberschwemmung; links vorn sitzt ein Flussgott, rechts klettern Menschen an einem Baum in die Höhe. Im Hintergrund eine Cathedrale über den Gewässern. Links oben auf einem Spruchband: O DEVS A MVLTIS AQVIS | NOS REDDE SECVROS.

Rev.: Oben der niederländische Löwe, darunter: GODS SLAANDE HAND | BEZOEKT ONS NEDERLAND, | MET WATERVLOEDEN, HOOG GESTEGEN; | MET DUURE TYDEN BANG EN NAAR : | DE LYDERS WORDEN INT GEVAAR | VAN HONGERS·NOOD OM BROOD VERLEGEN | GEHULPEN DOORS LANDS OPPERMAGT, | OP'T HOOGST GEACHT · | N · V · S · — FEC · | 17—41 zu beiden Seiten eines Wappens mit 2 Löwen.

Silber. Dm. 47.

Komet von 1744.

16. *Av.:* Komet unter Sternen. Unten einige unbelaubte Bäume. Im Abschnitt: 1744·

Rev.: WER HAT | DES | HERRN | SINN | ERKANNT? | RÖM · XI · 34 ·

Ducat in Gold. Dm. 22.

Heuschreckenplage 1748.

*17. *Av.:* Eine Heuschrecke: EIN UNGEBETNER GAST; im Abschnitt: AVS FREMDEN | LANDEN | .

Rev.: Bäume, darüber Heuschreckenwolke. KOMMT FELD UND WALD ZUR LAST | . Im Abschnitt: 1748.

Silber. Dm. 22.

Wassersnoth in Holland 1775.

18. *Av.:* Vorn eine Pappel, an deren Fuss Waarenballen, Fässer etc., im Hintergrund Meer mit Schiffen. Umschrift: SPES NOSTRA IN DEO · Im Abschnitt: IN UTRAQUE FIDES | FORTUNA · | I · M · LAGEMAN ·

Rev.: Oben Strahlen, darunter 5 Zeilen: TER GEHENGENISSE | DER STORM WINDEN | EN OVERSTROOMINGE | DER WATEREN DEN 14 | EN 15 NOV · 1775 · | Darunter Anker, Caduceus, Rauchgefäss etc.

Silber. Dm. 31.

Wassersnoth in Europa 1784.

*19. *Av.:* Hinten die Thürme einer Stadt, vorn bewegtes Wasser mit mehreren Schiffen. Auf dem Segel des einen steht: EURO und darin sitzt König David. Oben: WASSERS-NOTH IN EUROPA. Umschrift: ICH BIN IN TIEFEN WASSER U : DIE FLUTH WILL MICH ERSAEIFE · Im Abschnitt: PS · 69 · V · 3 · | REICH F ·

Rev.: Ueberschwemmte Stadt, darüber ein Regenbogen. Umschrift: ICH WILL DENCKEN AN MEINEN BUND · 1 · B · MO : 9 · Im Abschnitt: KLEINE SÜNDFLUT · | D · 27 · F : 1784 ·

Zinn-Medaille. — Dm. 45.

Nachtrag.

Zu pag. 8.

23 a. Pest zu Leipzig; 1680.

Av.: Ansicht der Stadt A° 1680 den 18. Dec.

Rev.: Aaron und die Israeliten.

Conf. Daasdorf, Leitfaden zur sächsischen Geschichte, No. 928.

Berichtigungen.

Pag. 36, Z. 1 und 8 v. u. lies statt Knittel: Johann Kittel; Münzgraveur zu Breslau, † 1739.
Pag. 39, Z. 2 v. o. lies: er hält in der Rechten eine Trompete . . .

Druck von R. Wagner in Weimar.





Der Typhus in der Kaserne zu Weimar von 1836—1867, mit Berücksichtigung der anderen gleichzeitigen Epidemien.

Von

Dr. L. Pfeiffer in Weimar.

Angeregt durch die Untersuchungen Buhl's über den Zusammenhang von Typhus mit den Schwankungen des Grundwassers in München, die im Verein mit den jetzt anerkannten Entdeckungen Pettenkofer's über die Hilfsursachen für Choleraepidemien der öffentlichen Gesundheitspflege ganz neue und praktisch verwerthbare Gesichtspuncte liefern, versucht Verfasser in Nachfolgendem die auffallende Typhusmorbilität zu beleuchten, wie diese in den Journalen des Weimarischen Militärspitales seit 1836 niedergelegt und ihm durch die Güte des Herrn Oberstabs- und Regimentsarztes Dr. Horn in Weimar zugänglich gemacht ist. An Stelle der jahrelang fortgeführten Grundwassermessungen in München, deren schwankender Werth so genauen Schritt hält mit den Schwankungen der Typhustodesfälle, kann Verfasser nur einige Anhaltepuncte bieten, die indessen beweisen, dass in der anscheinend so gesund und hochgelegenen Kaserne zu Weimar eine fortlaufende Kette von Typhuserkrankungen in ungünstigen Untergrundsverhältnissen ihre Ursache hat und dass das zeitweilige epidemische Auftreten des Typhus daselbst mit Feuchtigkeitsverhältnissen unterhalb der Häuser in Verbindung stehen muss.

Es findet sich der Typhus (Abdominaltyphus) in Thüringen in sehr grosser Verbreitung. Ebensowohl die volkreichen Städte an der nördlichen Abdachung des Thüringer Waldes, als Orte im Gebirge selbst liefern jedes Jahr eine grössere oder kleinere Anzahl von Erkrankungen und auch der im Westen an den Thüringer Wald sich anschliessende Gebirgsstock der Rhön hat auf seinem Basaltboden einzelne ganz verheerende Epidemien gehabt.

Abdruck aus der Jenaischen Zeitschrift. Bd. IV. Heft 1.

Fortlaufende Ketten von Typhuserkrankungen[1]) finden sich in Eisenach (Ackerhof, Untergasse, Fischerstadt), in Gotha (Gegend am Brühl), in Weimar (Graben, Brühl, Bahnhofstrasse etc.), in Apolda (Heidenberg), in Wiehe etc. und giebt die auffallende Localisation der Cholera von 1866 in denselben Districten fast Gewissheit, dass die Aetiologie dieser beiden Krankheiten sehr viel Gemeinschaftliches haben muss.

Es ist zur Zeit noch nicht genügendes Material vorhanden, um in Thüringen die Beziehungen von Typhuslocalitäten zu Cholera einerseits, und weiter zu Malaria, für welch Letztere ein räumlicher Antagonismus ebenfalls nicht zu bestehen scheint, ins Klare bringen zu können. Bei der umschriebenen Verbreitung der Cholera und bei der kleinen räumlichen Ausdehnung der Malaria in Thüringen ist die hier angeregte Frage eine mit verhältnissmässig weniger Schwierigkeiten verknüpfte und findet der neu gegründete ärztliche Verein von Thüringen hier jedenfalls ein dankbares Feld.

Nach beifolgender Uebersicht der Typhuserkrankungen ist die Vertheilung derselben über die einzelnen Monate des Jahres im Ganzen eine ziemlich gleichmässige, zumal wenn man die beiden grösseren Epidemien von 1839 und 1867 in Abrechnung bringt. Von den beiden grösseren Epidemien fällt eine in den Herbst (mit 64 Erkrankungen), die andern auf den Winter (21). Die Typhuserkrankungen der Kaserne stehen in keinem nachweisbaren Zusammenhang mit gleichen Erkrankungen in der auf dem andern Ufer der Ilm gelegenen Stadt. In den Jahren 1859—66 sind in der Stadt mehrfach gehäufte Erkrankungen von den Aerzten beobachtet worden und zum Theil von dem ärztlichen Verein zu Weimar zur Feststellung einer Typhuskarte benutzt worden, während unter dem Militär dieselben sich nicht über das Durchschnittsmittel erheben. Im letzten Jahre (1867) war im Frühjahr die Stadt fast frei und nur in den, im Rücken der Kaserne liegenden Ortschaften, Oberweimar und Ehringsdorf, kamen vereinzelte Erkrankungen vor.

Die Durchschnittsanzahl von Typhuserkrankungen beträgt nach beifolgender Zusammenstellung fast 7, und ist dieses Mittel in dem vorliegenden Beobachtungsmaterial von 31 Jahren nur 6 mal überschritten worden, in den Jahren 1839, 1840, 1841, 1856, 1857 und 1867.

Die Epidemie von 1839 (gewöhnlicher Dienstbestand in der Kaserne 5 Compagnien à 50 Mann, mit den Eingezogenen c. 500 Mann), die stärkste aller beobachteten, fällt zusammen mit der Herbsteinziehung. Es erkrankten viele der Neueingezogenen und bestätigt sich

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1) Ausführlicheres in: Choleraverhältnisse Thüringens vom Verfasser. München, Oldenbourg 1867.

Tab. I.

Uebersicht der Typhuserkrankungen im Militärlazareth zu Weimar 1836 — 1867.

Jahr	Januar	Februar	März	April	Mai	Juni	Juli	August	September	October	November	December	Sa.	Davon gestorben	Krankenbestand	Ueberhaupt gestorben
1836	.	.	.	.	.	.	.	.	.	.	.	.	—	—		
1837	.	.	1	.	.	.	.	.	.	.	.	.	1	1		
1838	.	.	.	.	.	.	.	.	.	.	.	1	1	—		
1839	2	.	.	.	1	2	2	2	24	18	13	.	64	9		
1840	2	.	.	.	.	2	1	1	.	1	1	.	8	1		
1841	2	5	2	.	4	1	.	1	.	.	1	.	16	1		
1842	.	1	1	1	1	1	.	.	1	1	.	.	7	1		
1843	1	.	.	3	.	.	.	.	.	.	.	.	4	—		
1844	.	1	.	.	.	.	.	.	.	.	.	.	1	—		
1845	.	.	.	.	.	.	.	1	1	.	.	2	4	1		
1846	.	.	.	.	.	.	.	.	2	1	.	.	3	—		
1847	.	.	.	1	.	.	1	.	.	.	.	.	2	—		
1848	1	.	.	.	.	.	.	.	2	1	1	.	5	—		
1849	.	.	.	1	.	1	.	.	.	.	.	.	2	1	756	4
1850	1	.	.	.	.	.	.	.	.	.	.	.	1	1	646	4
1851	.	.	.	.	.	.	.	.	.	.	.	.	—	—	698	1
1852	.	.	.	.	.	.	.	.	1	.	.	.	1	—	637	—
1853	.	.	.	1	.	1	.	1	1	1	.	.	5	2	842	2
1854	.	.	.	.	.	.	2	4	.	.	1	.	7	2	902	4
1855	.	1	.	2	1	1	.	.	.	1	1	.	7	—	972	1
1856	1	.	1	.	.	1	1	7	.	.	1	.	12	1	888	1
1857	.	1	.	.	1	2	1	2	2	1	1	.	11	2	1048	2
1858	.	.	.	.	.	1	.	2	1	.	1	.	5	—	744	—
1859	.	.	1	.	.	.	.	.	1	.	.	.	2	—	1018	—
1860	.	.	.	1	.	1	.	2	1	.	.	.	5	—	974	1
1861	.	.	.	.	2	.	.	.	.	1	.	.	3	1	1118	1
1862	.	.	.	.	.	1	.	.	.	.	.	.	1	—	748	—
1863	.	.	.	.	.	.	.	.	.	1	1	.	2	—	1042	1
1864	.	.	.	.	.	.	1	1	1	.	.	.	3	—	1457	2
1865	.	.	.	.	.	.	2	1	2	1	.	.	6	1	1659	4
1866	1	.	.	.	1	1	.	.	.	.	.	.	3	1	1442	3
1867	.	7	12	2	.	.	.	.	.	.	.	.	21	4	?	?
	11	16	18	12	11	16	11	25	40	28	22	3	213	30	—	?

Mit Ausnahme der beiden grösseren Epidemien von 1839 und 1867 vertheilen sich die übrigen 128 Erkrankungen von 28 Jahren folgendermaassen:

Januar	Februar	März	April	Mai	Juni	Juli	August	September	October	November	December	Sa.
9	9	6	10	10	14	9	23	16	10	9	3	128

die Thatsache, dass Umzug vom Land in die Stadt (d. h. engere Wohnräume, mehr Aufenthalt in schlechter Luft etc.) die Disposition steigert. Specielle Ursachen ausser den in früherer Zeit sehr beschränkten Wohnungsverhältnissen können nicht angegeben werden.

Für die zweitstärkste Epidemie (gewöhnlicher Dienstbestand 700 Mann) des Jahres 1867 lässt sich eine derartige Schädlichkeit nicht anführen und muss, da in den letzten 10 Jahren sowohl die Wohnungs- als auch die Nahrungsverhältnisse der Soldaten bedeutend verbessert wurden, eine Ursache dieser plötzlichen Zunahme nur in Einflüssen gesucht werden, die ausserhalb der socialen Beziehungen stehen müssen.

Die schlossähnliche Kaserne liegt weit hin sichtbar an dem Rande eines Plateaus, c. 150 Fuss über dem Spiegel der nahe vorüberfliessenden Ilm und c. 800 Fuss über dem Meere. Nach der Ilm und nach der jenseits derselben liegenden Stadt zu fällt das Terrain ziemlich steil ab, weniger steil nach SO, nach Oberweimar zu. Nach O. dehnt sich das Plateau, einzelne Terrainfalten abgerechnet, weit aus, mit zahlreichen und starken Quellen in den Terrainfalten (Papierbach von Oberweimar, Quelle im Park, Quelle im Rebhühnerpark auf den sogenannten 90 Aeckern und nach starkem Regen auf den Aeckern nach N. von der Kaserne, auf der »Grossmutter« und im Webicht).

Den geologischen Untergrund dieses Plateaus bilden theilweis dünne Muschelkalkbänke, die in bröcklichen unregelmässigen Schichten mit Letten abwechseln. Der grösste Theil aber besteht aus Alluvionen, wie sie sich jenseits der Ilm nach dem Gottesacker zu (Vorwerksgasse) finden (Lehm) und aus Kiesgeröllen, wie sie bei Süssenborn über 80 Fuss hoch zu Tage liegen.

Die Kaserne mit den Nebengebäuden liegt in einer der oben geschilderten wasserreichen Terrainfalten des Plateaus und finden sich zu beiden Seiten der ganzen Wilhelmsallee zahlreiche Brunnen. Die jetzige, im Jahre 1855 neu erbaute Kaserne ist zum Theil aus den dünnen Muschelkalkplatten gebaut, die unter dem östlichen Flügel des Gebäudes selbst gebrochen wurden. Der westliche Flügel steht auf Geröll und »Knatz« (Keuperletten ?) und hat sich nach der Vollendung des Baues so gesenkt, dass das Gebäude in der Mitte starke Risse bekommen hat. Die Abtrittsgrube befindet sich am östlichen Flügel in dem früheren Steinbruche angelegt. Die frühere Kaserne mit sehr ungünstigen Räumlichkeiten befand sich in dem jetzt zum Lazareth eingerichteten Gebäude und steht dasselbe wahrscheinlich ganz auf Alluvium. Die Brunnen am Kasernenberge haben eine wechselnde Tiefe von 18—26—30 Fuss und variiren im Wasserstand bedeutend.

Der Einfluss socialer Missstände lässt sich in Bezug auf den Aus-

bruch von Typhusepidemien beim Militär leichter übersehen, als bei der Civilbevölkerung. Es giebt die Kaserne zu Weimar den Beleg, dass ohne sociales Elend (SIMON) doch Epidemien entstehen können und ist das sociale Elend als ätiologisches Moment überhaupt ein Factor, der sich zu allen Zeiten auch unter einer relativ gesunden Bevölkerung in grösseren und kleineren Orten jederzeit nachweisen lässt. Wenn man auch der früheren Kaserne zu Weimar den Vorwurf machen konnte, dass sie übervölkert war, so trifft dies doch kaum die jetzige Kaserne, die luftig gelegen, nicht durch Mauern eingeengt ist, in welcher den Bewohnern eine ausreichende Kost verabreicht und in welcher dienstlich auf Reinlichkeit der Räume und der Bewohner gesehen wird. Ungünstige Einflüsse von Seiten der Beschäftigung der Soldaten können nicht stark prädisponirend eingewirkt haben, da bei ziemlich gleichmässiger Beschäftigung in 30 Jahren nur 6 mal eine stärkere Typhusmorbilität vorkam.

Zur Erklärung der Exacerbationen des Typhus bedarf es, wie BUHL sagt, einer Ursache im grossen Styl, die, wie sie für München in den Schwankungen des Grundwassers sicher nachgewiesen und berechnet[1]), auch für die frühere und jetzige Kaserne zu Weimar vorhanden ist.

Die dem Militär zugehörigen Baulichkeiten stehen (mit Einschluss des östlichen Hügels der neuen Kaserne) auf einem porösen, für Luft und Wasser durchgängigen Untergrund, der bei c. 25 Fuss Grundwasser führt.

Das Grundwasser unterliegt bedeutenden Schwankungen, wie der schwankende Wasserstand der Pumpbrunnen daselbst beweist. Der Wasserstand war im Herbst 1866 so hoch, dass nach N von der Kaserne auf den c. 200 Fuss entfernten Aeckern eine Quelle zu Tage trat. Im Februar 1867 hatte der Brunnen vor dem Lazareth auffallend wenig Wasser, war am ganzen Kasernenberg Wassermangel, der erst im März und April sich wieder ausgeglichen hatte. Es trifft somit die Typhusepidemie vom Winter 1867 mit einem tiefen Stand des Grundwassers zusammen und scheint auch das Erlöschen mit dem Steigen desselben in Beziehung zu stehen.

Aehnliche Verhältnisse constatirte der ärztliche Verein für die im Frühjahr 1866 in dem Typhusbezirk von Weimar (Brühl, Wagnergasse, Töpfergasse, Kirchgassen etc.) auffallend spät eingetretenen Erkrankungen. Es ging dieser Epidemie ein starkes Fallen des Grundwassers in jenen Stadttheilen voraus.

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1) SEIDEL, Zeitschrift für Biologie, Bd. I.

Verschiedene kleinere Epidemien, die Verfasser im Sommer und Herbst 1865 in der Umgebung von Eisenach im Anschluss an die Epidemie von Meningitis des Winters 64/65 [1]) zu beobachten Gelegenheit hatte, treffen ebenfalls mit einem Eingehen der dort allein vorhandenen Pumpbrunnen zusammen. Zumal in dem Dorfe Uetterode war ein solch unerhörter Wassermangel und eine so starke Typhusepidemie, wie sich kein Einwohner eines Gleichen erinnern konnte.

Die Hauptpuncte des von Buhl aufgefundenen Zusammengehens von Grundwasserschwankungen und Typhusmorbilität finden sich demnach im Untergrund der Kaserne. — Die von dem ärztlichen Verein zu Weimar schon längst angeregten ständigen Grundwassermessungen werden voraussichtlich eine Bestätigung der anderweitigen interessanten directen beiderseitigen Abhängigkeit, eine Bestätigung des Gesetzes, ergeben:

> dass die Dauer und Raschheit der auf- oder abwärtsgehenden Bewegung des Grundwassers das Maass enthält für die In- und Extensität des Typhus, d. h.
> dass plötzliches tiefes Zurückgehen des Grundwassers z. B. eine starke Epidemie mit stärkster Mortalität im Beginn derselben vorhersagen lässt.

Es finden wahrscheinlich die für das Auftreten und die Verbreitung der Cholera jetzt anerkannten Grundsätze auch hier ihre Anwendung, muss für epidemische Verbreitung des Typhus eine Regeneration des Contagiums, das auch hier in den Entleerungen zu suchen ist, im Boden statt haben und ist der dazu günstige Zustand des Bodens vorhanden, wenn beim Zurückgehen des Grundwassers durch die nachfolgende Luft die im Boden deponirten Abtrittsstoffe in Fäulniss übergehen.

Durch die schon jahrelange Anhäufung von Soldaten auf dem oben als porös geschilderten Boden ist die Imprägnation desselben mit durch das Grundwasser gelösten excrementiellen Stoffen auf jeden Fall eine sehr bedeutende.

Die Lage der Senkgrube, an einer höhern Stelle des Terrains nach O. von der Kaserne, muss ein Sickern derselben unter der Kaserne hinweg nach dem Abhange des Plateaus zu veranlassen.

Eine verhältnissmässig starke Fäulnissentwickelung beim Zurückgehen des Grundwassers wird die natürliche Folge sein und findet dies eine Bestätigung darin, dass mehrere Brunnen jedesmal beim Beginn von Typhusepidemien mussten geschlossen werden wegen jauchiger

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1) Diese Zeitschrift. Bd. II. 1865.

Beschaffenheit des Wassers. Auch nach Gebrauch anderen, guten Wassers sind dann noch fortgesetzte Erkrankungen vorgekommen.

Die immer noch in Frage gestellte Contagiosität des Abdominaltyphus können wir durch Beispiele nicht erhärten. Der persönliche Verkehr ist in einer Kaserne viel zu verwickelt, als dass sich für derartige Untersuchungen Anhaltspuncte finden liessen. Die in der Poliklinik zu Jena durch Lotholz (Inauguraldissertation) zusammengestellten Beobachtungen über das Incubationsstadium des Abdominaltyphus (18—28 Tage!) bestätigen den von Griesinger aufgestellten Satz, dass eine Ansteckung von Seiten Typhuskranker erfolgt. Die sehr einfachen Verhältnisse der verschiedenen kleinen, jenen Beobachtungen zu Grunde liegenden Epidemien in wenig bevölkerten Orten finden sich so selten, dass diesen Beobachtungen ein doppelter Werth beigelegt werden muss.

Für die Erklärung der auffallenden Thatsache, dass seit 31 Jahren der Typhus eigentlich nie in der Kaserne erloschen ist, braucht aber nicht einmal eine öfter erneuerte Ansteckung von Einwohnern der Kaserne, oder eine öftere Importation von Typhuscontagium angenommen zu werden.

Die Tenacität des Typhuscontagiums ist eine ungeheure. In der Erlanger Klinik erkrankten 3 Jahre lang alle Kranken am Typhus, die in ein Zimmer gelegt wurden, in dem vor Jahren Typhuskranke gelegen hatten und kann die hier 30 Jahre lang zu verfolgende Reihe von Typhusfällen auf die Tenacität des Contagiums bezogen werden, welches event. jedes Zurückgehen des Grundwassers zu neuer, ausgedehnterer Regeneration benutzt.

In directem Anschluss an die Typhuserkrankungen im Februar und März 1867 kamen im Militärlazareth zahlreiche Wechselfiebererkrankungen zur Beobachtung, von denen es anfangs zweifelhaft war, ob dieselben nicht gleichen ätiologischen Ursprunges mit der vorausgegangenen Epidemie seien. Vereinzelte oder auch mehrfache Wechselfiebererkrankungen kommen alljährlich vor,

1840.	1842.	1844.	1846.	1847.	1848.	1849.	1851.	1853.
1.	1.	1.	1.	2.	7.	72.	3.	5.
1854.	1855.	1856.	1858.	1859.	1860.	1862.	1863.	1865.
8.	7.	5.	3.	2.	1.	6.	5.	1.
1866.	1867.							
3.	12.							

Doch sind die Erkrankten meist Recruten aus den Dörfern im Rieth der Gera und der Unstrut, oder solche, die auf der Wanderschaft Fieberorte besuchten. So kommen z. B. von den 7 Wechselfieberkranken des Jahres 1855

2 auf Allstedt.
2 – Kalbsrieth.
1 – Wolferstedt.
1 – Niederpöllnitz.
1 – Heigendorf.

Nur die gehäuften Erkrankungen im Jahre 1849 und 1867 liessen sich nicht auf so einfache Weise erklären, zumal 1867 ein so directer Anschluss an die eben so unerwartete Typhusepidemie statt hatte:

Typhus 1867	Februar	10. 21. 22. 23. 27. 27. 27.
	März	2. 3. 3. 4. 5. 5. 5. 8. 8. 12. 15. 25.
	April	3. 13.
Wechselfieber 1867	April	8. 12. 18. 21.
	Mai	14. 18. 18. 20. 23. 29.
	Juni	12. 20.

Auffallend war, dass unter den Wechselfieberkranken sich nur Soldaten des I. Bataillons befanden, welche im August 1866 in Rastatt in Kasematten (Friedrichsfeste) gelegen hatten und dass vom II. und III. Weimarischen Bataillon mit Quartieren in Ulm kein Einziger erkrankte. An eine Infection in Weimar war, da die Soldaten des III. Bataillons in derselben Kaserne und unter sonst gleichen Verhältnissen sich befinden, nicht zu denken und muss demnach trotz des langen Incubationsstadiums von 6 Monaten die Infection auf die Friedrichsfeste in Rastatt bezogen werden.

Räthselhaft würde diese Epidemie geblieben sein, wenn nicht bereits für die massenhaften Wechselfiebererkrankungen des Jahres 1849 sich ähnliche ätiologische Beziehungen hätten finden lassen. Im August und September 1848 war das Weimarische Militär in der Stärke von 1000 Mann nach Schleswig ausgerückt mit Quartieren in und in der Nähe von Flensburg. Bereits auf dem Heimwege erkrankten einzelne am Wechselfieber, aber erst im Frühjahr 1849, also ebenfalls wieder nach einer fast 6monatlichen Latenz, kam es zu den massenhaften Erkrankungen unter dem damals geringen Dienstbestand und viele mittlerweile Entlassene überstanden ihre Krankheit in der Heimath. Zahlreichere Typhuserkrankungen kamen damals nach Tab. I nicht vor. Man kann die Salubritätsverhältnisse der Kaserne nicht beschuldigen, dass gerade durch sie eine frühere Infection zur Perfection gekommen sei.

Die anderweiten im Militärlazareth beobachteten epidemischen Krankheitsformen haben wegen der geringen Zahl der vorgekommenen Fälle nur untergeordnetes Interesse. Die beigegebene Tabelle II. giebt

Tab. II.

Im Jahre	Januar bis März	April bis Juni	Juli bis September	October bis December	Summa
1836	Varioloiden 2	Varioloiden 2	Varioloid. 14	Varioloiden 1	Varioloiden 19
1840				Parotidis 8	Parotidis 8
1842	Varioloiden 1	Varioloiden 4			Varioloiden 5
1844			Varioloiden 2		Varioloiden 2
1845	Parotidis 4	Erysipelas 2		Erysipelas 1	Parotidis 4 Erysipelas 3
1847	Morbillen 2				Morbillen 2
1848	Morbillen 3		Varioloiden 1		Varioloiden 1 Morbillen 3
1849	Parotidis 1 Morbillen 3	Varioloiden 7 Erysipelas 2	Varioloiden 3	Varioloiden 9	Varioloiden 19 Parotidis 1 Erysipelas 2 Morbillen 3
1850	Erysipelas 3	Varioloiden 1 Parotidis 1 Erysipelas 2	Erysipelas 4	Varioloiden 1 Erysipelas 2	Varioloiden 2 Parotidis 1 Erysipelas 11
1851	Influenza 3	Erysipelas 1	Parotidis 1 Erysipelas 3	Influenza 1	Parotidis 1 Erysipelas 4 Influenza 4
1852		Erysipelas 3	Erysipelas 1		Erysipelas 4
1853	Erysipelas 4	Erysipelas 7	Parotidis 14 Erysipelas 7		Parotidis 14 Erysipelas 18
1854	Varioloiden 2	Varioloiden 2 Erysipelas 5	Erysipelas 12	Erysipelas 1	Varioloiden 4 Erysipelas 18
1855	Varioloiden 1 Parotidis 1 Erysipelas 2	Varioloiden 1 Erysipelas 10 Influenza 3	Erysipelas 3 Influenza 3	Influenza 2	Varioloiden 2 Parotidis 1 Erysipelas 15 Influenza 8
1856	Erysipelas 3	Varioloiden 3 Erysipelas 5	Erysipelas 4	Erysipelas 1	Varioloiden 3 Erysipelas 13
1857	Erysipelas 3	Erysipelas 8 Morbillen 3	Varioloiden 3 Erysipelas 4 Morbillen 1	Erysipelas 2	Varioloiden 3 Erysipelas 17 Morbillen 4

Fortsetzung von Tab. II.

Im Jahre	Januar bis März	April bis Juni	Juli bis September	October bis December	Summa
1858	Scarlatina 1	Erysipelas 4 Scarlatina 1	Erysipelas 5 Morbillen 1	Varioloiden 2	Varioloiden 2 Erysipelas 9 Scarlatina und Morbillen 3
1859	Varioloiden 2 Parotidis 1	Varioloiden 2 Parotidis 4 Erysipelas 8	Parotidis 2 Erysipelas 4	Erysipelas 4	Varioloiden 4 Parotidis 7 Erysipelas 16
1860		Erysipelas 2	Erysipelas 5	Erysipelas 3	Erysipelas 10
1861	Morbillen 3	Erysipelas 5	Erysipelas 1		Erysipelas 6 Morbillen 3
1862		Erysipelas 7	Erysipelas 3		Erysipelas 10
1863	Erysipelas 2	Erysipelas 5	Varioloiden 2 Erysipelas 5	Varioloiden 6 Erysipelas 2 Influenza 12	Varioloiden 8 Erysipelas 14 Influenza 12
1864	Varioloiden 2 Erysipelas 1	Erysipelas 3	Erysipelas 3	Erysipelas 2	Varioloiden 2 Erysipelas 9
1865	Parotidis 3 Erysipelas 2	Erysipelas 3	Erysipelas 5	Erysipelas 2	Parotidis 3 Erysipelas 12
1866	Parotidis 3 Erysipelas 3 Morbillen 10 Scarlatina 1	Erysipelas 3	Erysipelas 3	Erysipelas 1 Cholera 2 Cholerine 4	Parotidis 3 Erysipelas 10 Morbillen 10 Scarlatina 1 Cholera } 6 Cholerine }
1867	Erysipelas 2 Diphtheritis 14	Erysipelas 2			
Summa ohne 1867	Varioloid. 10 Parotidis 13 Erysipelas 23 Morbillen 21 Scarlatina 2 Influenza 3 72	Varioloid. 22 Parotidis 5 Erysipelas 85 Morbillen 3 Scarlatina 1 Influenza 3 119	Varioloid. 25 Parotidis 17 Erysipelas 72 Morbillen 2 Scarlatina — Influenza 3 119	Varioloid. 19 Parotidis 8 Erysipelas 21 Morbillen — Scarlatina — Influenza 15 63	Varioloiden 76 Parotidis 43 Erysipelas 201 Morbillen 26 Scarlatina 3 Influenza 24 (?) 373.

eine Uebersicht der in den 30 Jahren notirten Fälle von Erysipelas, Varioloiden, Morbillen, Scarlatina, Parotidis und Influenza. Leider ist die Diphtheritis in den Krankenrapports nicht berücksichtigt.

Die Uebersicht zeigt eine fortlaufende Anzahl von Erysipelasfällen (mit Ausschluss von Lymphangitis und Phlegmone) durch eine lange Reihe von Jahren, die im Durchschnitt mehr auf die wärmere Jahreszeit fallen und die häufig sporadisch, in manchen Jahren aber auch in grösserer Anzahl mit acuten Exanthemen zusammen vorkommen. Bösartige Formen sind kaum zur Beobachtung gekommen. So nach der Typhusepidemie von 1867 ein Fall, in dem fast 1 Quadratfuss Bauchwand mit einem grossen Theil des Zellgewebes am Scrotum und Penis brandig ausgestossen wurde, und der in Heilung ausging.

Kleinere Epidemien von Parotidis sind verhältnissmässig häufig zur Beobachtung gekommen, doch lässt sich hier ebenso wenig wie für die Fälle von Rothlauf irgend ein äusseres ätiologisches Moment geltend machen. Meist findet sich die Parotidis vor oder nach oder auch gleichzeitig mit acuten Exanthemen, und im Ganzen ziemlich gleichmässig über das ganze Jahr vertheilt.

Parotidis wurde beobachtet

Gleichzeitig mit
- Blattern 1850, 1855, 1859.
- Erysipelas 1853, 1859, 1866.
- Influenza 1851.
- Masern 1866.
- Scharlach 1866.

Vorausgehend vor
- Rothlauf 1853.
- Blattern 1864.

Nachfolgend auf
- Blattern 1849.
- Rothlauf 1865.

Isolirt
- 1845.
- 1840 (Typhus).

Halsentzündungen kamen durchschnittlich 30—40 in jedem Jahre in Behandlung; Ausnahmsweise stark vertreten in den letzten Jahren

1860.	1861.	1862.	1863.	1864.	1865.	1866.
30.	39.	22.	40.	115.	116.	89.

jedoch ist nicht mehr nachzukommen, wie sehr diphtheritische Processe hierbei betheiligt sind (die in neuerer Zeit entschieden häufig vorkommen).

Lediglich der Vollständigkeit wegen sei noch angeführt, dass jährlich 2—5 bis höchstens 11 Lungenentzündungen vorkamen.

Acute Gelenkrheumatismen durchschnittlich 1—2—3 in jedem Jahr.

Nagelgeschwüre durchschnittlich 33, Minimum 12, Maximum 63.

Muskelrheumatismen in folgender Vertheilung:

1849.	1850.	1851.	1852.	1853.	1854.	1855.	1856.	1857.
40.	55.	60.	85.	61.	61.	78.	46.	54.

1858.	1859.	1860.	1861.	1862.	1863.	1864.	1865.	1866.
36.	100.	101.	93.	63.	120.	164.	180.	131.

wobei zu berücksichtigen ist, dass der Dienstbestand der letzten Jahre fast das Doppelte ist von z. B. dem des Jahres 1839.

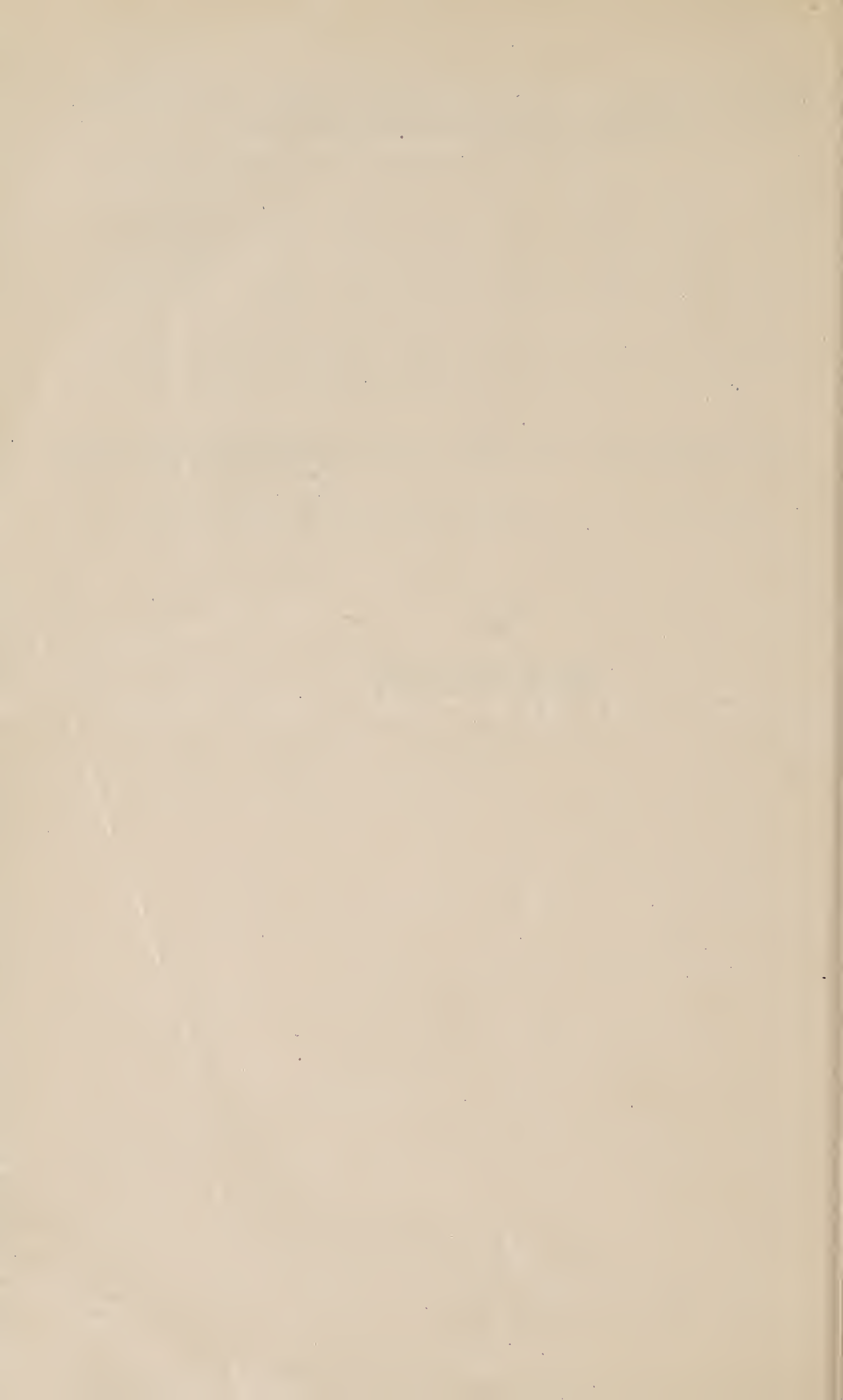
Sonder-Abdruck aus Nr. 11 der Korrespondenz-Blätter des Allgemeinen ärztlichen Vereins von Thüringen 1912.

THE PHYSICIAN IN NORTH AMERICA, BEFORE COLUMBUS.

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BY

LUDWIG PFEIFFER.
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Der Arzt in Nordamerika in der vorkolumbischen Zeit.

Reisebericht.

Die anatomischen Kenntnisse der alten Schamanen sind nicht gering zu achten. Hingewiesen sei auf die Sektionstechnik der Azteken für das Herausreißen des Herzens aus dem lebendigen Opfer: noch zuckend und blutend mußte der Opferschlächter das Herz der Gottheit darbieten. Wie von der Bauchhöhle aus durch einen Schnitt in das Zwerchfell und den Herzbeutel das Ziel erreicht wurde, ist in Nr. 2, 1911 der Korrespondenzblätter mit zahlreichen Abbildungen an der Hand von alten mexikanischen Codices beschrieben worden. Die kostbaren Opferschalen sind dahin gedeutet worden, sofort das Blut zu defibrinieren, um es vom Opferplatz aus auf die öffentlichen Götzenbilder und die Hausgötzen verteilen zu können.

In der Krankenheilung hat die Trepanation eine große Rolle gespielt. In den historischen Museen der Vereinigten Staaten sind zahlreiche Belegstücke gesammelt. Sie sind zahlreicher, als die an anderen Orten gesammelten Funde aus der Südsee.

Verfasser hat das Museum der Medical School in Boston und das Med. Museum in Washingten näher daraufhin betrachtet. Besonders das letztere ist reich an Knochenverletzungen durch Pfeilschüsse, an pathologischen Knochenpräparaten, an trepanierten Schädeln. Auf mehr als 1000 Knochenwunden kommen ca. 25 Trepanationswunden. Über die Trepanationen im Jardin des plantes in Paris, im Berliner Museum für Völkerkunde, im Kopenhagener und Weimarischen Museum hat Unterzeichneter schon vor einigen Jahren berichtet. Das Sammelgenie der Amerikaner hat in Washington gleich ein kleines Museum zusammengebracht. R. Fletcher hat das große Material, besonders aus Peru, in den Contrib. of the N. A. Ethnology zusammengestellt. Sicher datierte Fundstücke gehören der vorkolumbischen Zeit an. Einige sind dem Unterzeichneten besonders aufgefallen. So ein geheilter, sehr großer Knochendefekt über dem linken Schläfenbein; weiter ein in der Stirn flachgedrückter peruanischer Schädel mit drei Trepanationslöchern auf der Höhe des Schädels. Zwei Löcher, durch Schaben mit Feuersteinsplittern erzeugt, sind vernarbt. Um Verletzungen handelt es sich nicht, da die äußere Wunde in der Glastafel sehr viel größer

ist als in der inneren Wand des Schädels. Das dritte Trepanationsloch ist in abweichender Technik ausgeführt; die vier Seiten sind geradlinig, also gesägt. Keine Spur einer Knochenvernarbung ist an der dritten Trepanation zu sehen und dürfte demnach der Operierte diesmal an den Folgen des Eingriffes bald verstorben sein. Allem Anschein nach hat der Patient mit dem Arzt gewechselt.

Daß der Chirurg sich nicht scheute, eine Trepanationswunde tief an der Hinterhauptsschuppe anzulegen, bezeugt eine geheilte Schabwunde an einem anderen birnförmigen Peruanerschädel. Es ist das die Stelle am Schädel, von welcher aus die modernste Chirurgie sich den Zugang zum Ganglion Gasseri eröffnet. — Auch eine Brustbeintrepanation (?) ist vorhanden von Mahon-mound (Hügelgrab) bei Seoierville, Tenn., mit der Katalognummer 11 235. Sie ist bezeichnet als „congenital opening". Ebensolche Löcher hat Unterzeichneter beschrieben vom Jardin des plantes, von zwei Brustbeinen aus einem Steinkistengrab bei Scherfede, geborgen im Berliner Völkermuseum. Von einem deutschen Anatomen sind diese Löcher als Druckerscheinung von einem Aneurysma, von einem anderen als kongenitaler Defekt bezeichnet worden.

Die Knochen mit eingekeilten Feuerstein-Pfeilspitzen sind zum Teil alt, zum Teil stammen sie aus den letzten Indianerkriegen des vergangenen Jahrhunderts. Die in den Lazaretten mit Tod abgegangenen Pfeilschüsse zeigen die Spuren chirurgischer Eingriffe. Die auf die Pfeilspitzen übertragene Propulsionskraft ist eine bedeutende gewesen. Einige sind durch das Schädeldach hindurch gegangen, andere sind $1 \frac{1}{2}$ cm tief in die Tibia eingedrungen. Heilungen nach Gehirnverletzung werden von Moorhead[1]) in seinem Stene age of Northamerica (1910) beschrieben.

Hier sei zur Kasuistik der Pfeilverletzungen auf ein Belegstück in dem American Museum of natural history in New York hingewiesen, bei dessen Betrachtung sich unmittelbar das Empfinden aufdrängt, daß so etwas auch nur in Amerika vorkommen kann: Drei Indianerskelette sind zusammen mit 23 Pfeilspitzen und entsprechenden Knochenverletzungen gefunden worden. Im Krieg sind diese drei Indianer nicht gefallen; vielleicht haben Kriegsgefangene als eine Art von Schießscheibe bei einem Fest des z. Z. in New York ansässigen Indianerstammes gedient. Die drei Skelette liegen in Hockerstellung nebeneinander. Bei dem ersten Skelett sind 3 Pfeilspitzen neben der Wirbelsäule gelegen; eine vierte ist zwischen zwei Rippen hindurchgegangen und hat Einkerbung derselben veranlaßt; eine fünfte hat das Schulterblatt getroffen, zwei weitere sind in beide Handgelenke eingedrungen. Die interessanteste Verletzung hat eine knöcherne Pfeilspitze verursacht, die zwischen zwei Rippen hindurch nach einer Rippe der anderen Seite weiter vorgedrungen ist mit Hinterlassung einer glatten Knochenwunde in der Wand der letzten Rippe. Das zweite Skelett hat gleich starke Verletzungen, besonders auffällig ist eine Wunde im linken Oberschenkel. Bei demselben Skelett sind 8 Pfeilspitzen gefunden; das rechte Schulterblatt ist in Stücken vorhanden. Den Kopf scheinen

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[1]) Die Literatur über Wundbehandlung ist zusammengestellt bei Wilson, S. 955. Knochen- und Pfeilspitzenzangen, dem Belucum von Hippokrates oder Graphicos von Dioklet entsprechen, müssen gebraucht worden sein, sind aber, weil Metall in Nordamerika fehlte, nicht erhalten geblieben.

einige Pfeilspitzen getroffen zu haben, der bei der Gelegenheit zerbrochen wurde. Aus einem Wadenbein ist ein Splitter ausgesprengt. — Die Wirkung von Pfeil und Bogen in der vorkolumbischen Zeit könnte experimentell nicht besser demonstriert werden. — Der Entdecker der Skelette ist George H. Pepper; die Begräbnisstätte liegt in Tottenville, Staten Island bei New York. Interessant sind einige Schlußfolgerungen, die Pepper aus der Beschaffenheit der Pfeilspitzen gezogen hat. Das Material zu den Spitzen ist Feuerstein, Jaspis oder auch Knochen. Es überwiegt die dreieckige Form, mit 2 bis $2^1/_2$ cm Seitenlänge. Diese Art von Pfeilspitzen konnte, wegen der scharfen Dreieckskanten, nur locker an dem Pfeilschaft befestigt werden; sie trennte sich alsbald ab, wenn der Pfeil in den Körper eingedrungen war oder wenn der Schaft aus der Wunde herausgezogen wurde. — Welche Aufgaben der Schamane bei den durch Pfeil und Bogen verursachten Wunden zu erfüllen hatte, das dürfte aus diesem echt amerikanischen Schaustück sich ahnen lassen. Wenn am eingeschlagenen Schädel das Gehirn von eingedrungenen Peilspitzen durch die Trepanation gereinigt worden ist, so dürften auch bei Fleischwunden mancherlei Methoden zur Ausbildung gelangt sein. Wir wissen davon nichts. Ob der Betrieb „ins Große, Unbegrenzte, Amerikanische“ eine vererbte Anpassung der Leute an das Land ist? Wenn im Verlauf der Studienreise einzelne Teilnehmer begeistert von dem Massenbetrieb, von der Arbeitsteilung und den Operationsmethoden in der chirurgischen Klinik von Rochester zu erzählen wußten, ist dem Unterzeichneten immer die Erinnerung an die 23 Pfeilspitzen in New York und die 3 Trepanationen im Kriegsmuseum von Washington aufgetaucht.

Erwähnt sei an dieser Stelle noch der Reichtum des Washingtoner Museums an Knochen mit tertiärer Syphilis; Formen, die heute nicht mehr vorkommen wegen der erfolgreicheren Therapie. Ein Skelett zeigt die Erkrankung am Schädel und an fast allen großen Knochen. Sudhoff behauptete jüngst, daß bereits in präkolumbischer Zeit die Syphilis in Europa vorgekommen ist, nach Amerika importiert worden sei. Lamb aber (Washington Med. Annals[1]), daß Knochen- und andere Tuberkulose nicht in Peru vorkommen. Von den Belegstücken im Washingtoner Museum sind sicher eine Anzahl präkolumbisch.

Betreffend die Trepanationstechnik ist zu beachten, daß das Loch geschabt oder auch gesägt worden ist. Es kann nur Feuerstein benutzt worden sein, da von Metallen in Amerika zu der Zeit nur weiches Kupfer in Gebrauch gewesen ist.

Bei der Betrachtung des Schädels mit den drei Löchern liegt die Vermutung nahe, daß der Operierte sich nicht dreimal der Prozedur ohne Narkose unterzogen haben wird. Die Möglichkeit muß zugestanden werden, daß die Schamanen betäubende Pflanzenmittel verwendet haben. Es ist das bekannt, z. B. von Mexiko. Der zum Opfertod und zur Schindung bestimmte Mensch ist durch allerlei Vorbereitungen und Fasten in einen Zustand von Extase versetzt worden, in dem er freudig zum Opfertisch gegangen ist, beim Schlachten und Herausnehmen des Herzens vor versammeltem Volk keinen Widerstand geleistet hat. In der großen Anzahl der Tabak- und Zeremonienpfeifen in den nordamerikanischen Museen aus vorkolumbischer Zeit hat wohl öfter eine vergiftete Pille gelegen. Wie heute Chloroform und Äther, so hat der Schamane wahrscheinlich unter der Einatmung

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[1]) Vom Mai 1912.

narkotischer Dämpfe operiert. In Peru hat man an Opferplätzen auch Flaschen gefunden zur Verabreichung des Gifttrankes.

In verschiedenen alten Dörfern und Städten hat man die Wohnung des Schamanen aufdecken können. Aus Vogelknochen, langen Röhrenknochen sind Büchsen hergestellt, mit nicht näher bekanntem pflanzlichem Inhalt. Auch sonstige Spuren von Kräutervorräten hat man gefunden neben den verschiedenen Formen von Steinmörsern, Pistillen u. dgl. Zahlreiches sonstiges Hausgerät spricht für den Reichtum des Hausbesitzers. Außer den Steingeräten, den Tongeschirren und einzelnen Knochengeräten ist nicht viel erhalten geblieben, was uns über die Tätigkeit, die rituellen Gewohnheiten und auch über den vermutlichen Hokuspokus der Schamanen Aufschluß geben könnte.

Nachfolgend geben wir einige Notizen über das Steingerät, welches der Schamane benutzt hat. Trepanationen sind schon erwähnt. Die kleine Chirurgie hat sich auf die Einheilung von Löchern für Nasen-, Lippen- und Ohrenpflöcke bezogen, auf die Beschneidung zur Zeit der Pubertät. Bei der Menschenopferung arbeitete er mit fünf Assistenten.

Bis vor kurzer Zeit war man gewöhnt, das hinterlassene Steingerät vom Standpunkt der Waffenkunde zu betrachten. Das methodische Sammeln, z. B. in den Pfahlbauten und den Kjökkenmöddingern von Fischervölkern, hat in immer größerem Umfang die Verwendung beim Ackerbau, bei der Leder-, Holz- und Knochenbearbeitung kennen gelehrt. Auf die Beschaffung von Wohnung, Kleidung und besonders von pflanzlicher Nahrung ist nachweisbar viel Zeit und Arbeit verwendet worden, was auf relativ große Seßhaftigkeit und häuslichen Kulturfortschritt schließen läßt. Immer neue Belege dafür bringt uns die eingehende Beschäftigung mit der Technik der jüngeren Steinzeit.

Aber — es lassen sich die für die Steinzeit in Europa uns geläufigen Anschauungen nicht ohne weiteres auf Amerika übertragen. Die Kultur und speziell die Steintechnik, sind dort eigenartige Wege gegangen, die kurz gestreift werden müssen.

Ein Besuch der naturgeschichtlichen Museen von Nordamerika bringt als erste Überraschung die Massenhaftigkeit des Sammlungsmaterials. Nur ein geringer Teil ist geordnet und aufgestellt. In verschiedenen Museen sind wichtige Fundserien magaziniert, so daß der Besuch mehrerer Museen nötig wird, wenn spezielle Industrien studiert werden sollen.

Es folgt die weitere Überraschung, daß die vorkolumbische Kultur, welche auf der Verwendung des Feuersteins sich aufbaut, so gut wie unvermittelt in die Eisenzeit übergeht. Die Indianer haben bis vor 300 Jahren noch vollständig im Steinzeitalter gelebt. — Eine Bronzezeit, innerhalb welcher in der Alten Welt der Mensch sich rasch zu einer neuen Kulturstufe hinauf arbeitete, gibt es in Amerika nicht.

Kupfer ist bekannt gewesen und auch verarbeitet worden, hat aber die Technik kaum verändert. Am Südrand des Oberen Sees

kommt viel metallisches Kupfer vor und ist auch bereits seit langer Zeit im Tagebau von den Indianern (Odschibwä) bergmännisch gewonnen worden. Wegen der brillanten Farbe des Kupfers ist es zu Schmuck- und Kultgegenständen, auch zu Hackmessern und Pfeilspitzen verwendet worden. Es war ein beliebter Handelsartikel, der z. B. gegen Obsidian aus Kalifornien und dem Yellowstonegebiet vertauscht wurde. Einzelne Kupfergeräte sind bis nach Florida gelangt. Als Schneidgerät hat es aber im Gegensatz zu der Bronze der Alten Welt, nur wenig Verwendung gefunden wegen seiner Weichheit. Auch verstand man nur das Hämmern, nicht das Gießen des Kupfers.

Die Bekanntschaft mit dem Eisen hat sofort die gesamte Kupferindustrie vernichtet. Der Import von größeren Mengen beginnt mit den Expeditionen von de Soto nach Florida, von Coronado nach dem Südwest von Nordamerika in den Jahren 1540—1543. Bereits 1620 ist das Eisen in den Neu-Englandstaaten weit verbreitet. Eisen und Glasperlen waren die beliebtesten Handelsartikel. Ein Segen war mit diesem Import nicht verbunden; der Kulturstand der Indianer hat sich nicht gehoben, sie sind im Gegenteil unterdrückt worden bis zum Untergang als Rasse. Von den Geräten, welche die Indianer jener Zeit aus Eisen hergestellt haben, hat sich wenig erhalten. Selbst in dem dichtest bevölkerten Gebiet des heutigen Staates Ohio hat der Rost alles alte Eisengerät zerstört. Die Wohnplätze, die von 1700—1812 durch die kriegerischen Indianer unter ihren intelligenten Führern Tecunseh und Cornstock besetzt waren, haben kein Eisen, nur wenige Steingeräte hinterlassen.

Es fehlt also Eisen in dem Nachlaß der Indianer und damit auch ein Maßstab zur Abschätzung des Alters des Steingerätes. Töpferwaren und geschliffene Steine bieten nach der Richtung hin auch nur mangelhaften Anhalt; also wiederum ganz andere Verhältnisse als in der alten Welt. Hier ist Steinzeitforschung so weit vorgeschritten, daß verschiedene Phasen des Klimas und der Steintechnik in chronologischer Reihe sich gut unterscheiden lassen: Ein Eolithikum, das Erwachen der Kultur, mit rohest bearbeitetem Gerät, reicht weit in das Tertiär der Erdoberfläche zurück; es folgt eine archäolithische Phase von ca. 1 $^1/_2$ Millionen Jahren; eine paläolithische Phase berührt die letzte Eiszeit (IV, Würmbeiszeit), welche vor ca. 25 000 Jahren ihren Abschluß gefunden hat. Dann folgt in der postglazialen Zeit in Europa und Nordamerika, die neolithische Phase, ausgezeichnet in Europa durch das anscheinend unvermittelte Auftreten von geschliffenen Werkzeugen aus allerhand dichtem und zugfestem Stein, von Töpfereigeräten, Megalithbauten, der Zeit von 5000—2000 v. Ch. zugehörend. Die Bronzezeit soll reichen von 2000—1000 v. Ch., die Hallstatt-Eisenzeit von 700 v. Ch. bis zur La Tène-Eisenzeit von 100—300 n. Ch.

Nur die neolithische Kulturphase ist in Nordamerika vertreten; ihr Alter wird von amerikanischen Forschern auf 8000 Jahre geschätzt. Ältere, diluviale Funde von Menschenschädeln sind noch angezweifelt;

jedenfalls ist noch kein Neanderthalschädel in Amerika gefunden worden. Der Zeit nach ist es möglich, daß in einer Zeit großer Völkerwanderungen diese Kultur nach Amerika von Nordosten her, aus Europa und Nordafrika importiert worden ist. Das muß zugestanden werden, weil um das Jahr 1000 n. Ch. die Wikinger einigemal bis nach Newfoundland vorgedrungen sind. Das kann selbstverständlich auch früher, eventuell auf einem vorsintflutlichen Landweg geschehen sein. — Auf solche Spekulationen hier einzugehen, verbietet sich; die Erwähnung derselben soll nur andeuten, welche Perspektiven sich noch eröffnen können aus einer vertiefteren Kenntnis der Paläontologie überhaupt.

Gegen die Auffassung, daß alle amerikanischen Funde der neolithischen Kulturphase angehören, sind verschiedene Bedenken erhoben worden. Dahin gehört das massenhafte Vorkommen des Faustmessers oder Chelleskeiles, welcher in Europa schon am Ausgang der archäolithischen Phase, also um viele Jahrtausende früher, auftritt. Aber Skandinavien bietet ähnliche Überraschung; hier konnten die älteren Phasen der europäischen Kultur sich schlecht entwickeln, da das Land sehr lange unter Gletschereis begraben war. Als auf dem Festland Europas längst das Chellesmesser nicht mehr neu hergestellt wurde, ist dieses wieder in Skandinavien geschehen und hat, wie in Europa, so auch in Nordamerika die Steinkultur überhaupt wiederum mit der Ausbildung des Chelleshandmessers begonnen. Klinge und Griff sind in diesem ältesten Messertypus in einem Stück vereinigt. Das Chellesmesser kommt, in der Form des Mandelkerns vor, auch hier dreischenkelig, oder rund in Disqueform. Ganz rohe Formen, von ganz ungeschickten Händen hergestellt, oder für nächträgliche bessere Bearbeitung, als Halbfabrikat, sind in den amerikanischen Museen in großer Zahl gesammelt. Nordamerika hat viele Depotfunde solcher Chellesmesser; in Hügelgräbern, in der Nähe von Werkplätzen und Feuersteingruben, sind bis zu 5000 Stück und mehr zusammen gefunden worden. Sie sind auf beiden Flachseiten bearbeitet; die kleine Form, dem Umriß nach einer Moustierschneidspitze ähnelnd, ist ebenfalls ein häufiges Alltagsgerät gewesen, für feinere Arbeiten in Holz, Fell, Knochen usw. ersetzt durch pfeilspitzenförmig gestieltes Gerät. Die Pfeilspitzenmesser sind spezifisch für Amerika.

Vieles Hausgerät, in Höhlen oder auf dem Felde gefunden, dürfte ad hoc und in roher Form zurecht gespalten worden sein.

Neben diesen rohen Formen, die in allen Kulturphasen den nächsten Bedürfnissen des Haushaltes oder der Jagd genügt haben, zeigt das Neolithikum von Amerika, wie in Skandinavien, Ägypten, Frankreich — die Kabinettstücke der Feuersteintechnik — die handgroßen, flachen, dünnen Lorbeerblattspitzen und die bis über 30 cm langen, 2—4 cm breiten, ganz dünnen Messer- oder Speerklingen. Daß gerade diese, nur von wirklichen Kunsthandwerkern herstellbaren Messer in den Händen der Schamanen gewesen sind, lehren die Abbildungen von Menschenopfern in den mexikanischen Bilderschriften. Mit dem

lorbeerblattähnlichen Messer hat sich der Opferschlächter den Weg zum Herzen gebahnt.

Mit dem Besitz der Schamanen steht in engem Zusammenhang der Reichtum der amerikanischen Museen an zur Zeit noch nicht verständlichen Kultgegenständen: Tausende von Pfeifen für Tabak oder andere berauschende Pflanzenpräparate, sehr oft in vollendeter Formgebung und Politur. Die Friedenspfeife hat reich mit Federschmuck verziertes Rohr; selbst der Tomahawk hat öfter eine Einrichtung als Tabakspfeife gehabt; Stummelpfeifen mit nur fingergliedgroßem Raum für den Tabak sind in zahlreicheren Mustern vorhanden, als die Kataloge der heutigen Pfeifenfabriken, z. B. die Zieglersche in Ruhla, darbieten. Das in den europäischen Museen gebotene Material (mit Ausnahme des British Museums), gibt nur einen schwachen Abglanz des in Amerika angehäuften Reichtums. Moderne Nachbildungen geben die feine Technik der Kunstschnitzereien nicht wieder.

Viele Schaukästen sind angefüllt mit landwirtschaftlichem Gerät, wie Hacken aus Stein mit ausgepickter Rille (nicht Bohrloch) zur Befestigung eines Stieles, einzelne mit kostbarer Politur. Große und kleine Meißel, Hohlmeißel sind zahlreich vertreten. Die Grenze zwischen Werkzeug und Kultstück ist von den amerikanischen Archäolognn noch nicht gefunden; sie gehen unter dem Kollektivnamen „Problematic forms, ground stones" usw. und sind ein Beweis dafür, in welchem Umfang die gesamte Lebenshaltung, die Jagd, der Krieg, die Arbeit von mystischen Vorstellungen durchdrungen war. Eine erste Übersicht ist in dem vortrefflichen Buch von Moorehead über die Steinzeit in Nordamerika enthalten.[1])

Die ungezählten Exemplare von Mörsern und Reibkeulen erzählen von der Bedeutung, welche die Mehlbereitung und der Ackerbau neben der Jagd bei den alten Indianern gehabt hat. Mais (corn), Grasfrüchte, Eicheln, Nüsse, Knollenpflanzen sind mühsam von den Frauen zur Speise hergestellt, in Bastkörben mit glühenden Steinen gebacken oder zwischen heißen Steinen geröstet worden. Anderem Zweck dienten die kleinen Mörser mit noch anhaftender roter Farbe. Sie sind anscheinend in jedem besseren Haushalt vorhanden gewesen. Es war eine der Aufgaben des Schamanen, die in den Krieg ziehenden Männer recht abschreckend zu bemalen als Ergänzung des nie fehlenden Federschmuckes. Das Field-Museum in Chicago hat eine reiche Kollektion von Farbeplatten und Mörsern.

Eigenartig für Nordamerika ist noch die Verwendung von Speckstein (soap-stone) zu Kochtöpfen, Lampen. Sie sind aus massiven Felsstücken herausgearbeitet; alte Exemplare tragen die Spuren des Feuers. Verschiedene Museen haben Serien ausgestellt, die alle Stufen der Bearbeitung zeigen. Der gelehrte Direktor des Washingtoner Museums,

[1]) Erschienen 1910 in Boston.

Mr. Holmes, hat darüber eine Spezialstudie veröffentlicht (United National Museum, Report 1900).

Als eine überraschende Tatsache sei weiter angeführt, daß die Erinnerung an die Ureinwohner bei den Indianern schon zur Zeit des Kolumbus gänzlich erloschen war. Keine Sage schlägt die Brücke zu den alten mound builders und cliff dwellers, zum Verständnis des des prähistorischen Steingerätes — speziell der problematic forms. Krieg und Wanderung, verbunden mit vollständiger Vernichtung von volkreichen Stämmen sind anscheinend noch viel häufiger und rascher aufeinander gefolgt, als in Europa.

Aber auch für die jüngste Vergangenheit besteht dieser Verlust an Tradition. Moorehead erzählt von alten Indianern, die aus ihrer Kindheit schon nichts mehr angeben konnten über die frühere Verwendung der Steinäxte, der problematic forms.

Am gründlichsten hat die Invasion der „Weißen“ aufgeräumt. Moorehead ist der Meinung, daß die Urbevölkerung niemals mehr als eine Million betragen habe. Die letzte Volkszählung hat die Ziffer von 600 000 ergeben, welche der Mehrzahl nach in den staatlichen Reservationen untergebracht sind. Nur in entlegenen Gebirgstälern und auf engen Inseln leben noch einige Stämme mit den Gewohnheiten des Steinzeitmenschen, der primitiven Töpferei, Korbflechterei. Reinblütige Stämme, ohne Vermischung mit Weißen oder Negern, soll es kaum noch geben.

Ein Beispiel, wie rasch die Erinnerung in der Technik auch sonst erlischt, liefert die rezente Gerberei; altes Gerät ist seit der ersten Weltausstellung von Paris durch Maschinenarbeit vollständig außer Gebrauch gekommen, sodaß jüngere Arbeiter denselben verständnislos gegenüber stehen.

Wir glauben in den soeben mitgeteilten flüchtigen Reiseeindrücken die Belege dafür erbracht zu haben, daß in der Indianerkultur der Schamane den Mittelpunkt gebildet hat. Wir wiederholen, daß er auf alle Vorgänge des täglichen Lebens Einfluß gehabt hat. Das kostbare Feuersteingerät, von Künstlern von Fach in wochenlanger Arbeit hergestellt, war in seinem Besitz; ebenso wahrscheinlich auch kostbar bemalte Büffelfelle, Federschmuck, kostbare Flechtarbeiten und reiches Hausgerät, Schmuck aus Stein, gravierte Muscheln und viel unverständliches religiöses Gerät. Er muß besonders geschickte Arbeiter in seinem Sold gehabt haben, d. h. auch reich genug dazu gewesen sein. Er war nicht nur Krankenheiler, im Nebenamt zugleich auch Priester, Zauberer, Wahrsager, Opferschlächter für Menschen- und Tieropfer, Oberzeremonienmeister bei allen von tiefstem Mystizismus beherrschten Festen und Tänzen. Wahrscheinlich auch Meister in der Hypnose, der psychischen und der durch narkotische Mittel erzeugten. In größeren Gemeinden war der Priester vom Schamanenstand getrennt, bei anderen Stämmen Priester- und Häuptlingsrolle vereinigt. Bei den Ojibwäindianern vereinigten sich die Schamanen und ihre Gehilfen zu besonderen

Arztverbänden, die über verschiedene Orte sich erstreckten und sich gegenseitig unterstützten.

Die Kenntnis von dem, was man soziale Stellung des Arztes nennt, ist mit diesen Notizen noch lange nicht erschöpft. — Er hatte einen hohen Rang; wahrscheinlich aber auch eine sehr gefährdete Stellung, wenn seine Wahrsagungen nicht klappten oder ihm vornehme Patienten starben.

Vergleiche mit den heutigen Praxiszuständen in Amerika hat Verfasser absichtlich unterlassen. Von verschiedenen Mitgliedern der Studienreise ist darüber geschrieben worden, z. B. über Universitäten, Fortbildung, Ärzte- und Kurpfuschervereine, über Honorar, das Vorherrschen der Homöopathie, über Armenpraxis u. dgl. m. Es dürfte ein dreiwöchentlicher Amerikaaufenthalt dazu nicht genügt haben.

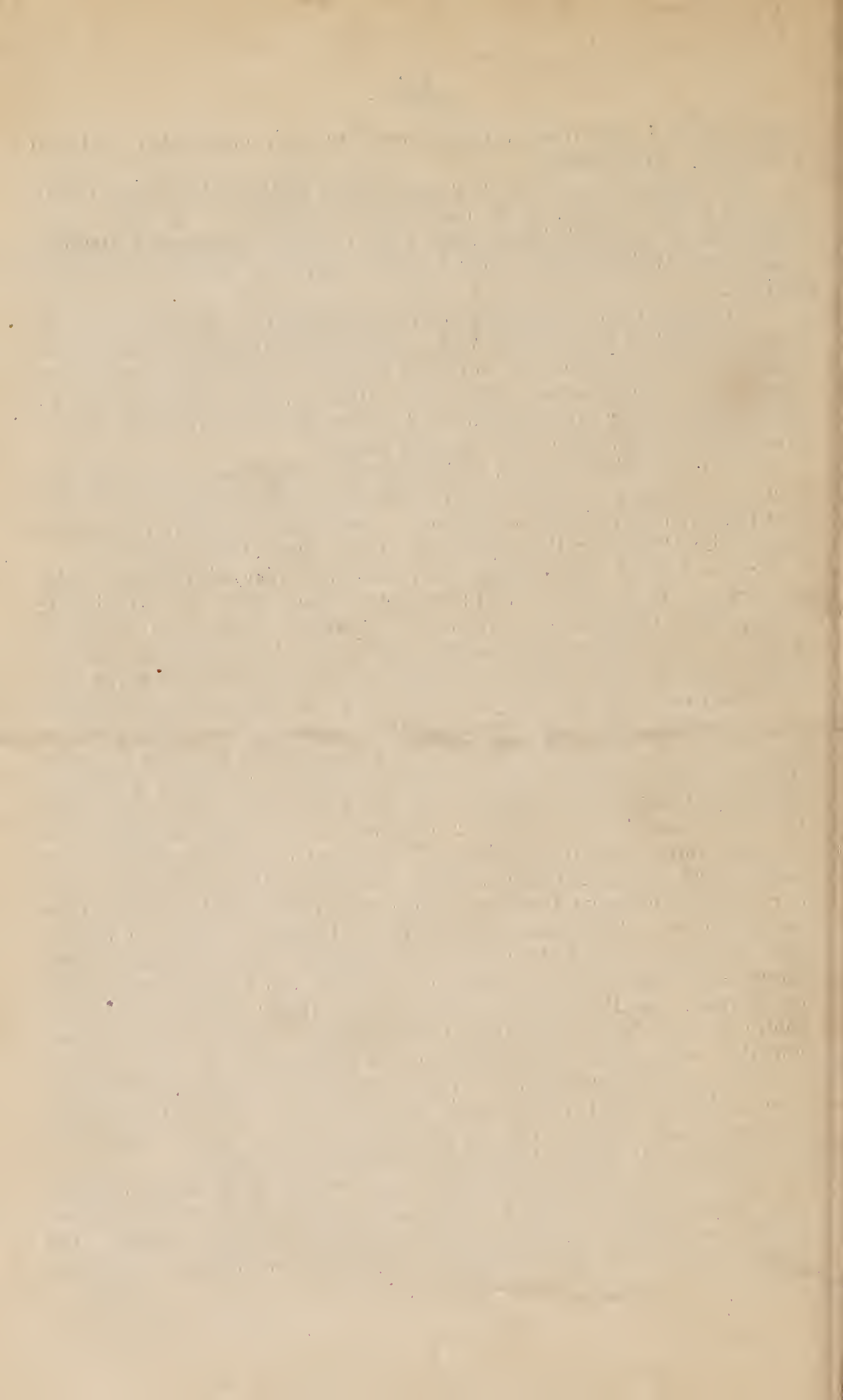
Vom menschlichen und technologischen Standpunkt aus darf man den vom Schamanen vertretenen Kulturstand der Indianer nicht als den von Barbaren oder Wilden bezeichnen. Den Menschenopfern in Amerika stehen die Opfer der Hexenprozesse in der Alten Welt zur Seite.

Zum Schluß konstatieren wir, daß von den überreichen Geldmitteln der amerikanischen Museen jetzt immer mehr zur Aufklärung der vorkolumbischen Zeit verwendet werden. Zahlreiche geschulte Forscher und Hilfsarbeiter, relativ viel mehr als in Europa, sind im Bureau und im „field-work" beschäftigt, bei den in der Umwandlung oder im Untergang befindlichen Indianerstämmen die Gebräuche zu studieren, das vorhandene ethnologische Material zu sammeln. — Von hier aus wird dann die Brücke betreten werden können, die Uranfänge der neolithischen Einwanderung und die problematischen Geräte zu verstehen. Erfahrene Lehrer sind vorhanden, die mit Erfolg sich Mühe geben, sich in den Ideenkreis der Indianer einzuleben, der ganz abweicht von heutigen Sitten und Gebräuchen. Wir stehen diesem Ideenkreis nicht mehr unwissend gegenüber, seitdem man sich klar gemacht hat, daß der Indianer unserem Ideenkreis noch viel verständnisloser gegenüber gestanden hat. Die neuere amerikanische Literatur bringt die Belege. Man versucht, territoriale und Stammesgebiete, nebst der zugehörigen Hinterlassenschaft, zu umgrenzen, den Einfluß von Völkerwanderungen, des Klimas, des Rohmaterials aufzufinden. Heute stehen noch ungezählte Funde ohne Verbindung nebeneinander; die des cliff-dwellers mit der vollendeten Töpferkunst, die Pueblokultur, die der mound builders, der Höhlenbewohner in der Ozarks, den Muschelhaufenstämmen in Florida, den Prärie- und Waldindianern. Da die französische Typologie hier versagt, das Steingerät nicht so in den Vordergrund tritt, muß die Hilfe der Ethnologie herangezogen werden.

Der Zweck des Reiseberichtes wird erfüllt sein, wenn derselbe dazu beiträgt, daß die Leser unseres grünen Blättchens zur Beteiligung an den heimischen, prähistorischen Forschungen angeregt werden. Die Lehrmittel sind in dem städtischen Museum von Weimar vorhanden.

L. Pf.

[Ludwig Pfeiffer]



THE CUSTODIANSHIP OF RUSH · JENNER · PASTEUR LISTER · CURIE MEMENTOS

IN THE CABINET OF
THE COLLEGE OF PHYSICIANS
OF PHILADELPHIA



HELD IN SUCCESSION BY
REPRESENTATIVE MEMBERS OF THE
MEDICAL PROFESSION OF THE
UNITED STATES

THE CUSTODIANSHIP CABINET OF
THE COLLEGE OF PHYSICIANS



THE COLLEGE OF PHYSICIANS

PHILADELPHIA

THE CUSTODIANSHIP CABINET OF THE COLLEGE OF PHYSICIANS

THE College of Physicians of Philadelphia has represented the lofty purpose and spirit of scientific medicine since the early days of our country, and seems the fitting repository of historic souvenirs, the nominal custodianship of which is an honor—worthy of our best men.

The spirit which actuates the lives of men of great accomplishments, is epitomized in these five representative scientists and physicians to whom this is dedicated.

The compelling force in all may be said to be: intensive preparation; unlimited resourcefulness in work; close and exact observation; strong conviction of right; defiant bravery; idealism; culture; religious faith; humanitarianism; and educative zeal.

Rush said, "I make everyone whom I meet contribute to my improvement."

Jenner wrote, "I am not surprised that men are not thankful to me, but I wonder that they are not more grateful to God, for the good which He has made me the instrument of conveying to my fellow creatures."

Pasteur said, "Opportunity comes to him who is prepared."

Lister said, "The scientist's public life lies in the work that is his."

Mme. Curie says, "I desire only to teach."

In the belief that such exalted lives are found in every decade, often in humblest surroundings, it is probable that the

man at the top will be more able to discriminate among contemporary workers, and to choose one whom he considers the exemplar of such traits.

The first chosen custodian of these mementos, Dr. Weir Mitchell, conceded by all to be such a representative spirit, was asked to name a successor, embodying the highest type of physician and educator, in productive scientific work. He chose Dr. Simon Flexner, of the Rockefeller Institute, New York. He followed the provision that the incumbent custodian should choose his successor from the ranks outside his own city. Dr. Flexner, after three years, asked to be permitted to pass on the honor during his lifetime, and chose Dr. Wm. H. Welch, of Baltimore, whom he considered the most worthy representative in our time. Dr. Welch has accepted the honor, saying, "Why, it's like the 'Gold-headed Cane,'" and has promised to choose a successor.

At longer or shorter intervals, the choice must fall on men, not necessarily known by popular acclaim or professional skill, but always by great humanitarian accomplishments and untiring work.

The letters of acceptance with portraits of each custodian preserved in the books in this cabinet will make, in time, an unmatched collection of distinguished autographs of notable American physicians.

A sufficient fund has been given with this case of mementos, to perpetuate and enhance the collection. Thus it will always be an honor to be chosen custodian, either by the incumbent, or in default of such choice, by the Council of the College of Physicians.

THE CASE AND MEMENTOS



WITH BOOKS CONTAINING PORTRAITS, ILLUSTRATIONS, AUTOGRAPH LETTERS AND BIOGRAPHIC NOTES, WITH THE CONDITIONS OF THE CUSTODIANSHIP

First Custodian—DR. WEIR MITCHELL, Philadelphia, 1910-1917.
Second Custodian—DR. SIMON FLEXNER, New York, 1917-1920.
Third Custodian—DR. WILLIAM HENRY WELCH, Baltimore, 1920—.

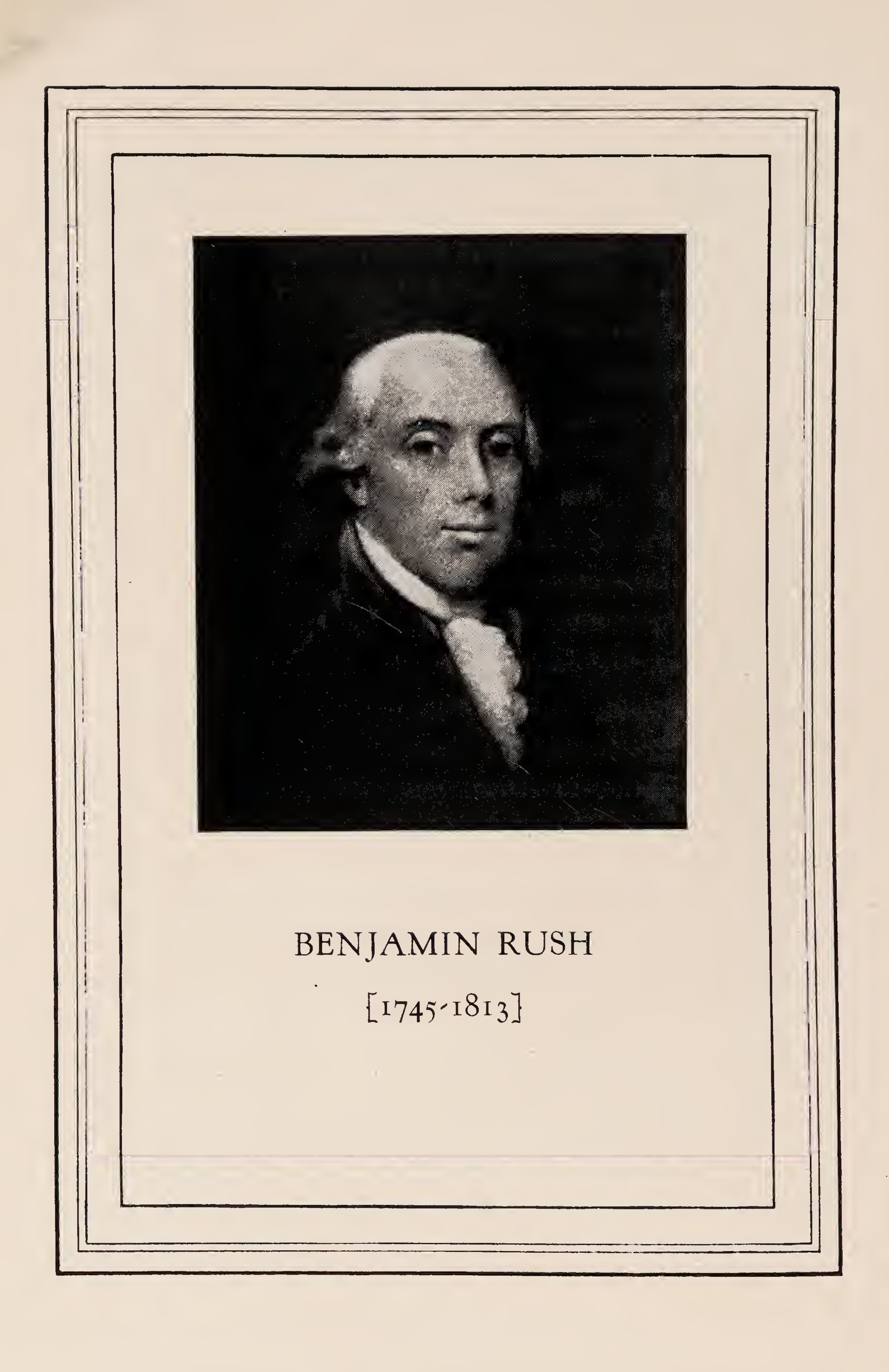
THIS CUSTODIANSHIP WAS FOUNDED BY ROBERT ABBE OF NEW YORK CITY, ASSOCIATE FELLOW OF THE COLLEGE OF PHYSICIANS, PHILADELPHIA



DEDICATION

THERE is an ethical foundation stone in the education of a medical man, which is just as essential as book knowledge, and laboratory work. The subtle power of the names which rank high in our profession, makes an impression upon the student's early manhood and unfolding character. A virile force pervades him when he has the high example of character held before him.

There are some names in our profession, which represent our medical ancestors, as it were, whose very spirit evokes a thrill when we come into actual touch with their belongings, such as no ordinary thing inspires. The actual objects that felt the living touch of the great Pasteur, Jenner, Lister, Rush, Curie, and others of like fame, are more sacred to us, than the cloak of Charlemagne or the cocked hat of Napoleon, for example. It needs not more than one verified article which was the intimate personal property of such human beings to visualize for us the whole character of the owner, and thrill the observer. Who would not glow with interest and sympathy when he sees the instruments used by Lord Lister in the early days of his work and triumph? Who would not travel a thousand miles to see and hear the immortal Pasteur, who put into action those compelling thoughts evolved out of his giant brain? Recently, in this decade, a new light has radiated on science from the Curie laboratory in Paris, which has not only revolutionized the conception and calculation of the forces of nature, but has put into the hands of our profession a weapon, hitherto unsuspected, to help control disease.



BENJAMIN RUSH

[1745-1813]

BENJAMIN RUSH

THE first of the five thrilling mementos in our cabinet is the beautiful watch of Dr. Benjamin Rush. Though there were doctors scarcely less cultivated and devoted, who dignified the early records of American medical service, yet, by common consent, the achievements of Dr. Rush are preeminent.



SHOE BUCKLE WORN BY DR. RUSH [ACTUAL SIZE]

In his day the seal of great deeds was stamped on our country's history by Washington, Adams, Hamilton, Franklin, Lafayette and a score of other noted patriots. Dr. Rush was the intimate friend of these, and of all the savants of his day. His name has come down to our time as, perhaps, the most representative medical man who combined

culture with patriotism, scientific zeal with literary attainments, and religious devotion, and an indomitable courage with unwearied power for work.

This watch is inscribed:

BENJAMIN RUSH
SIGNER OF THE DECLARATION OF INDEPENDENCE
OBIIT 1813
RICHARD RUSH
OB. 1859
BENJAMIN RUSH

It must have been his most highly prized personal possession and his constant companion. Even at this day, after a



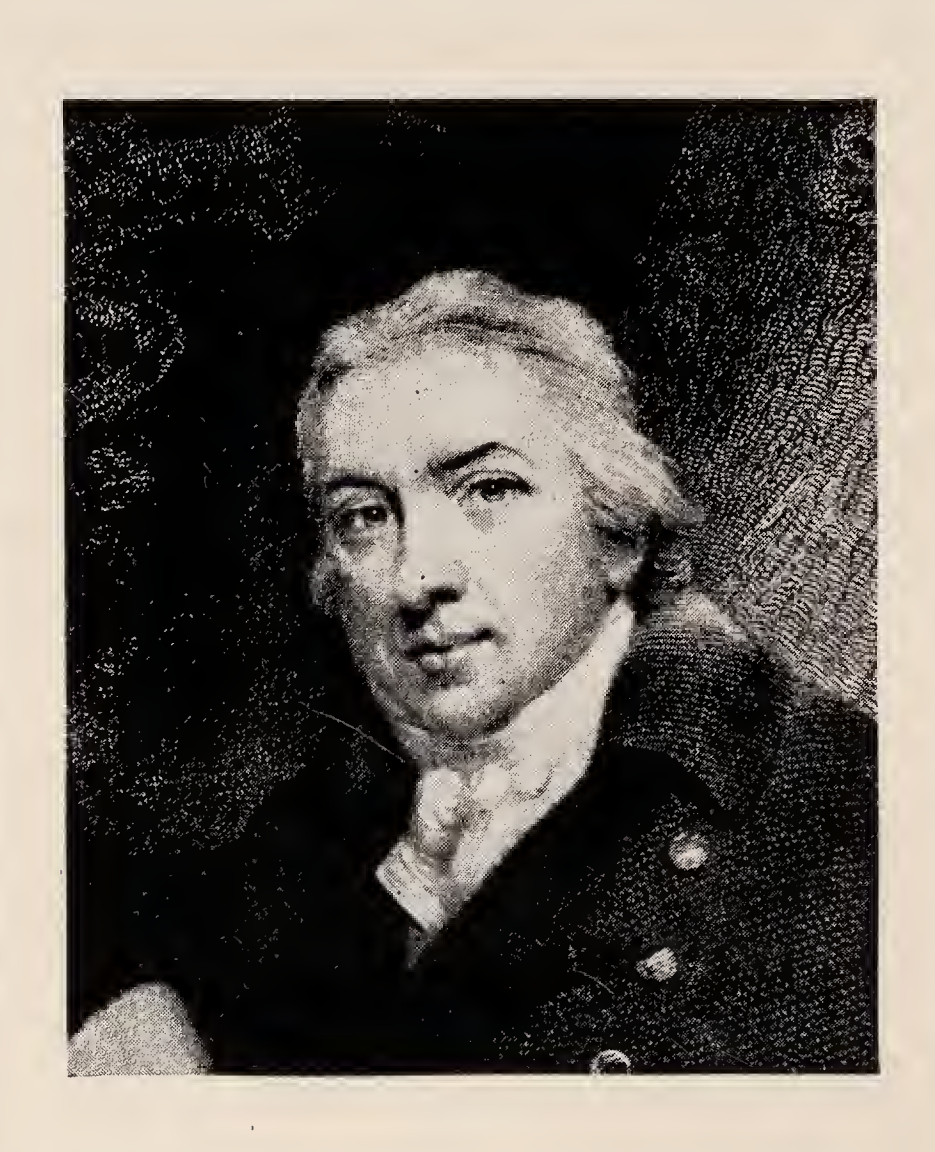
THE WATCH OF BENJAMIN RUSH

century and a half, it is a perfect time-keeper. It was his guide in all appointments, punctually kept, and must have been

under the eyes of many great men of the day; perhaps it witnessed the last hours of national heroes.

One feels a thrill when holding it in one's hand, and, as it ticks the seconds, one is drawn back in fancy, to the days when the same sound was heard by ears now deaf. It inspires in the visitor today, emulation of the spirit of its owner.

Another heirloom, a silver shoe buckle, set with brilliants, worn by Dr. Rush, has been given to this cabinet by his great grand-daughter, Catharine Rush Porter (Mrs. J. Biddle Porter). It suggests the gallant and chivalrous coterie of gentlemen who surrounded the first president of our country.



EDWARD JENNER

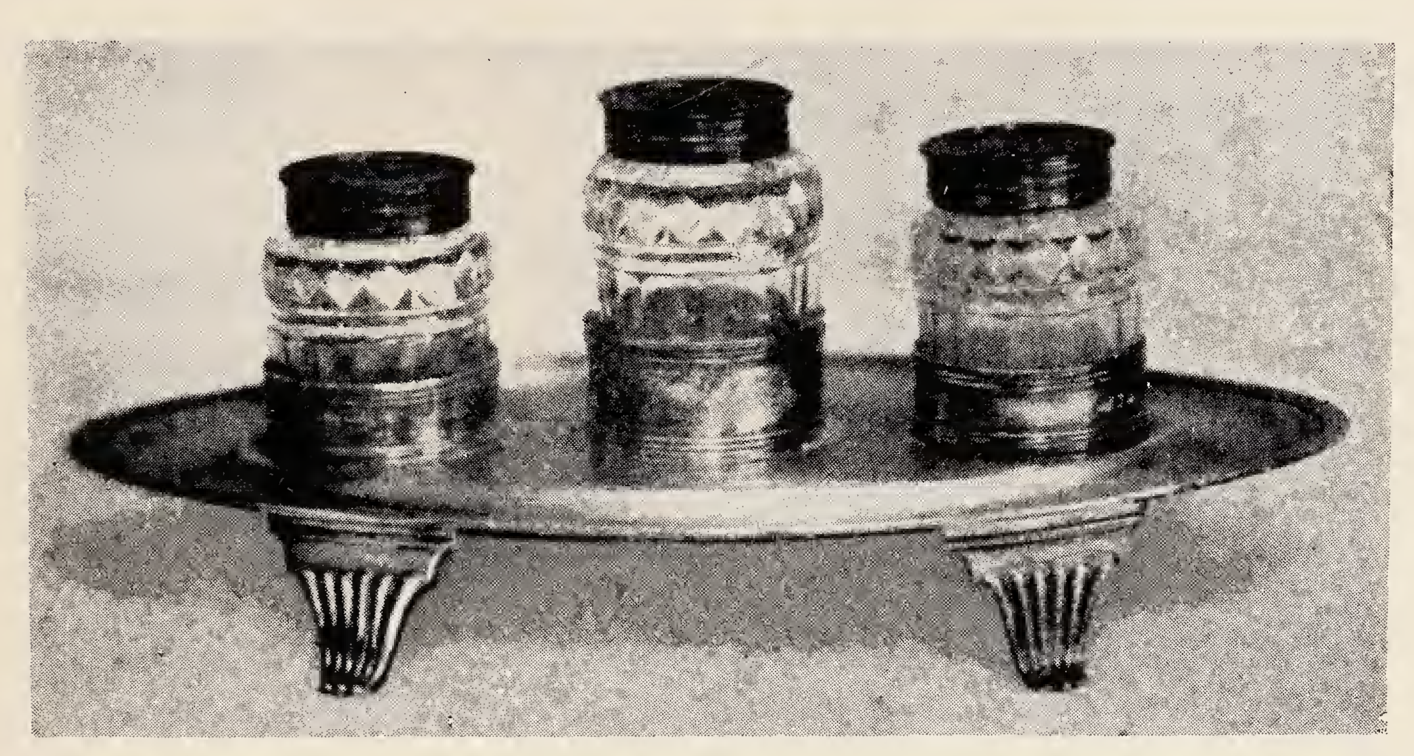
[1749-1823]

EDWARD JENNER

THE second memento in our cabinet is an inkstand, one of the personal possessions of Edward Jenner. His name is honored by the English-speaking peoples not more than by the civilized world.

This inkstand came into the possession of our loved Weir Mitchell, who used it reverently for years, and presented it to the College of Physicians at his death.

It has a peculiar charm, because it stands for literary effort, besides signalizing the long, weary fight Jenner made by his



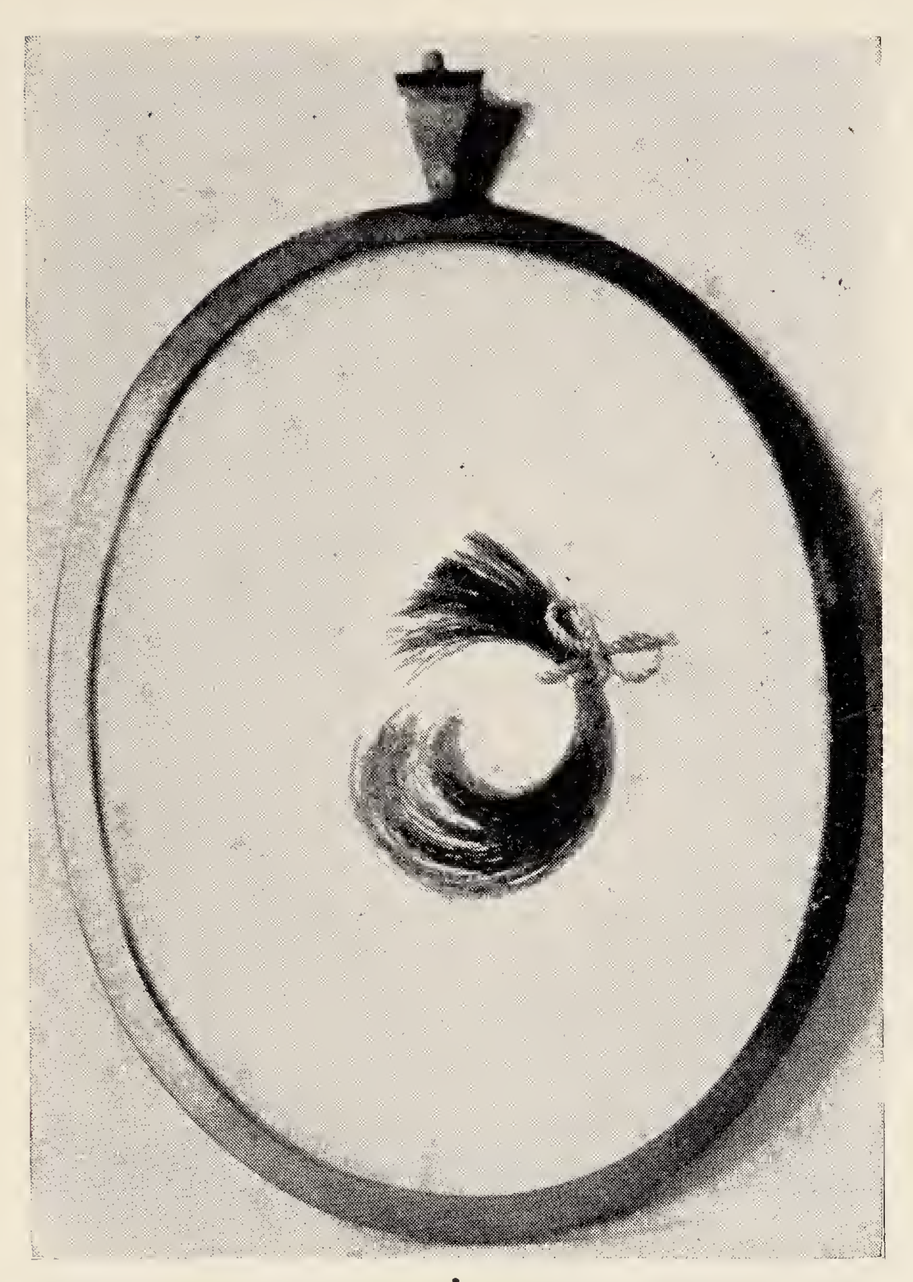
THE JENNER INKSTAND

writing and speeches, to obtain recognition for the principle of cowpox vaccination against smallpox.

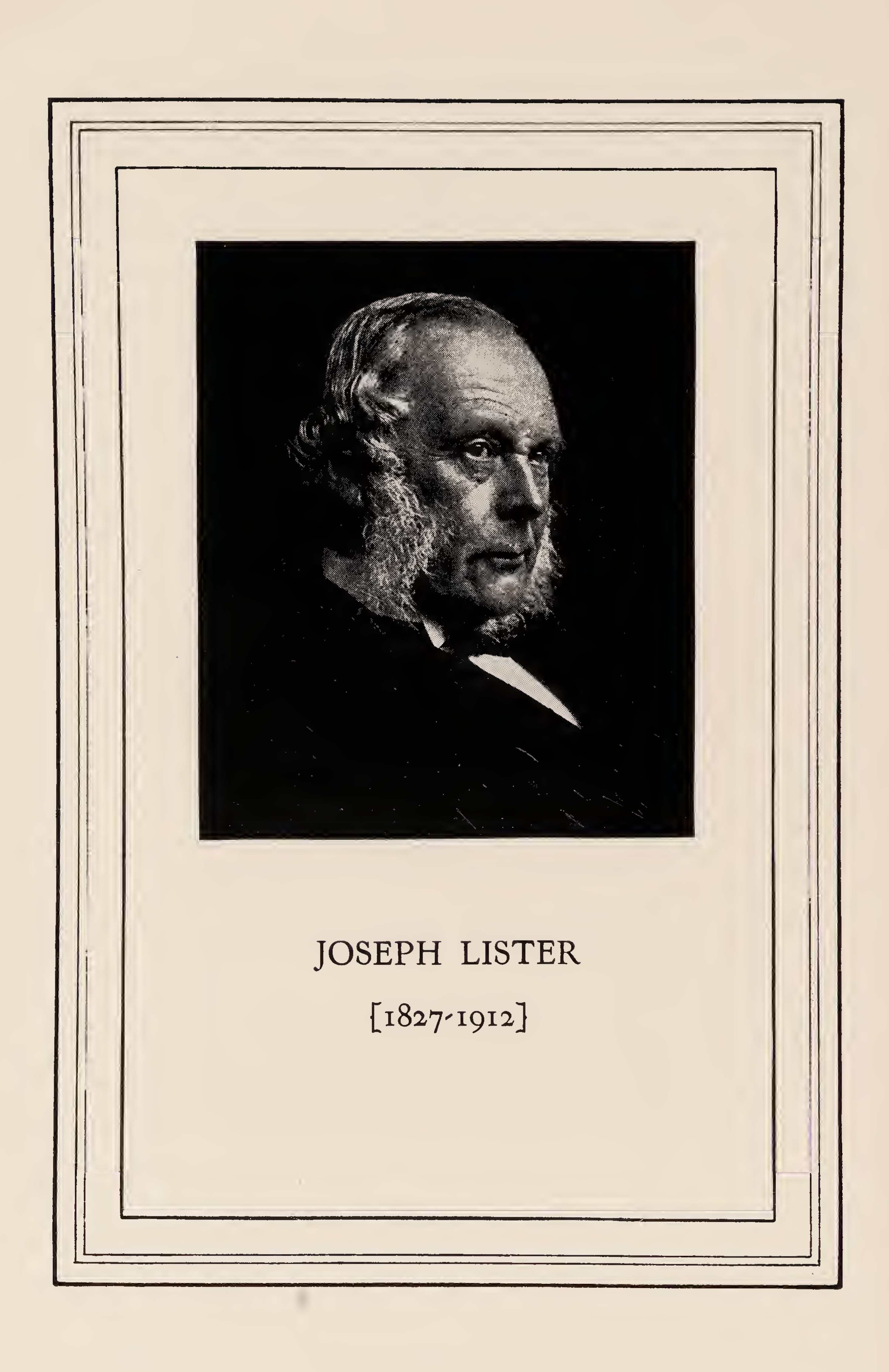
We realize the power for good of one indomitable will in a life-long fight to overcome prejudice and obstinate antagonism of friend and foe. We think of the enormous uplift of

civilized communities, from India and Russia through Europe to America, when freed from the dread scourge of smallpox.

The lesson of Jenner's life may be epitomized as a serious, thoughtful, conscientious, studious development of one fundamental discovery, a fact that was the kernel of a newly revealed principle in medical practice—vaccine therapy. To him it was revealed truth, and, as such, having the conviction, he gave up the best of his life to defending and spreading it broadcast. On every side he met opposition, which he broke down with indomitable determination.



THIS LOCK OF JENNER'S HAIR, PRESENTED TO THE COLLEGE OF PHYSICIANS BY WILLIAM OSLER, MARCH 1, 1893, BEARS THE FOLLOWING INSCRIPTION ON THE BACK OF THE LOCKET. "THIS HAIR WAS CUT OFF AFTER EDWARD JENNER'S DEATH BY MRS. AUSTIN OF SLONE, HIS NIECE, AND HANDED BY HER TO ME. W. R. AWDRY, JULY 29, 1892." BERKELEY, GLOUCESTERSHIRE, (ENGLAND).

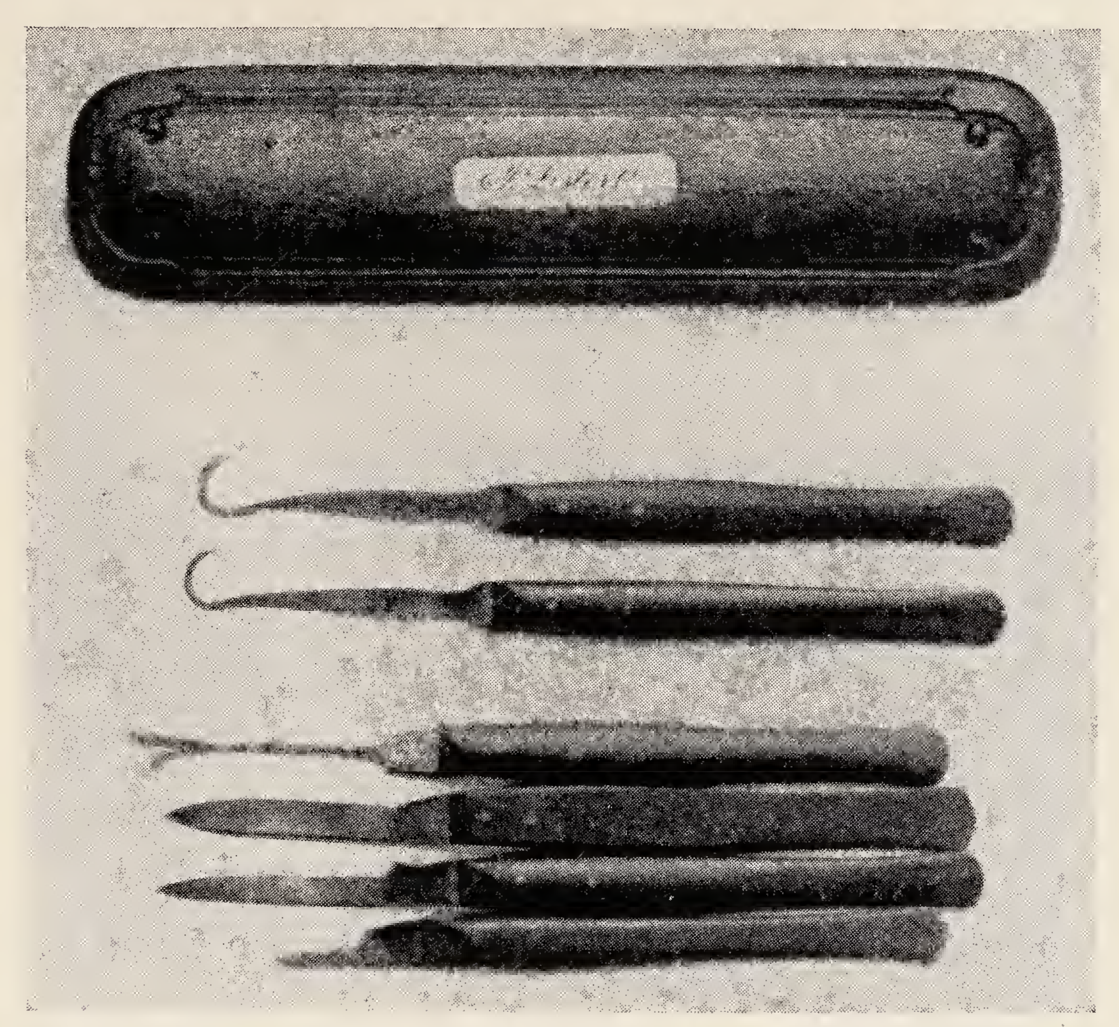


JOSEPH LISTER

[1827-1912]

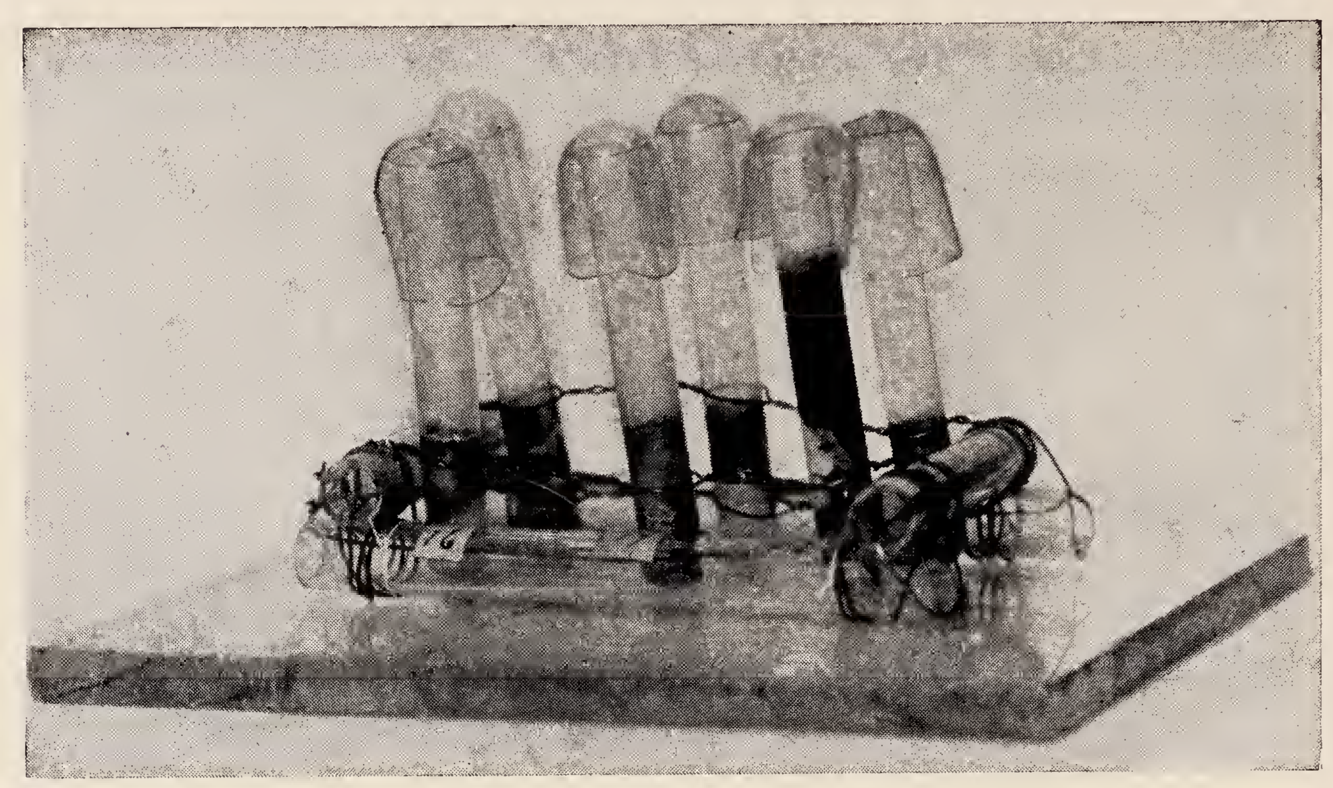
OF Lord Lister we are the fortunate possessors of two valued souvenirs. The first is a small case of surgical instruments used by Lord Lister. It was a part of his equipment, both in Glasgow and in Edinburgh, while he was developing his principles of antiseptic surgery, and, in London, where he was invited to take the chair of surgery in Kings College, but where he found the greatest difficulty in advancing his work.

It is almost impossible to find any article personal to him outside of the Lister Museum, but, through the kindness of



A SMALL CASE OF INSTRUMENTS USED BY JOSEPH LISTER
[NAME PLATE INSCRIBED "J. LISTER"]

Sir Rickman Godlee, a nephew of Lord Lister, and his biographer, we have been able to secure these two veritable articles. The box of surgical instruments has Joseph Lister's name on the cover of the case. They must have been used by him for many years. The instruments are of the make of



LISTER'S ORIGINAL TUBES FOR TESTS OF LACTIC ACID FERMENTATION

"Young" and "Borthwick, Edinburgh," and "Weiss, London."

Many of us have had the gratifying memory of seeing Lister operate, and will be impressed by the conscious sensation, that, perhaps, these very instruments were seen by us in his hands. How near it brings us to the man, who, by patient labor, developed the Listerian principles!

The second souvenir, full of human interest is a group of six small glass tubes, each with a thimble shaped glass cover, fitted in a rack made of four pieces of cut off glass tubing,

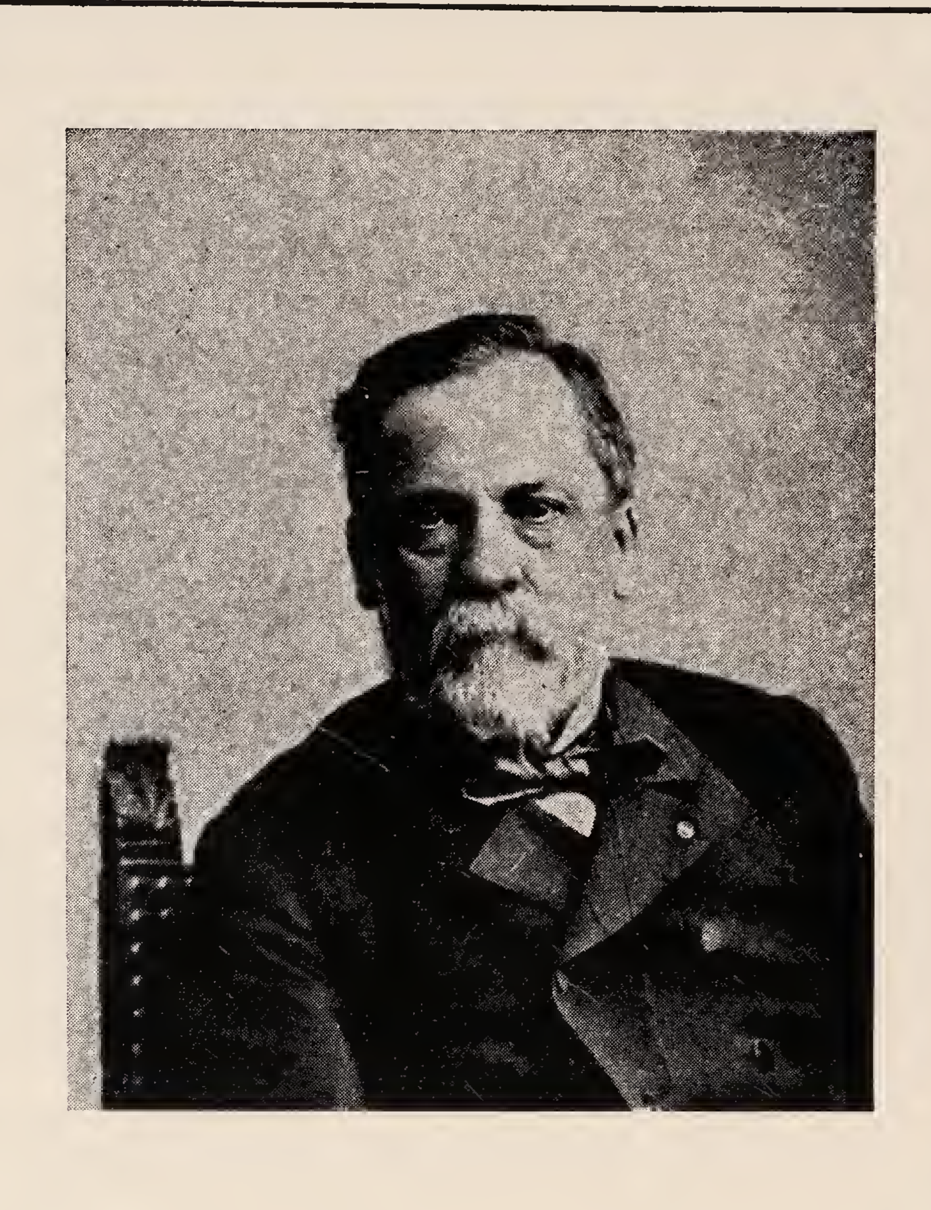
wired together by silver wire, which is further twisted, rope fashion, about the tubes to hold them together upright.

This rack is placed on a five inch square plate glass, and covered by a bell glass.

In his earliest private researches he fashioned these with his own hands, to accommodate it to a "hot-box" for sterilizing at 300°, before introducing into the six tubes fresh milk, either sterile, or slightly contaminated, to demonstrate that if dust can be prevented from getting access to the putrescible fluid, infection is impossible.

He used these tubes in his lectures, and for his own satisfaction, to show that milk could be kept sweet till it dried up. All these tubes contain the very remnants of his experimental fluids, some with and some without mould.

These identical tubes are illustrated in his biography (Godlee, p. 267), and in his "Collected writings" p. 302.



LOUIS PASTEUR

[1822-1895]

LOUIS PASTEUR

THE fourth souvenir is of the great Pasteur. By singular good fortune we have something characteristic. Precious to the hearts of the French people is everything connected with the life of Pasteur. This souvenir was generously given to the College of Physicians of Philadelphia, by Calmette, of the Pasteur Institute, formerly assistant to Pasteur, and transmitted by the hand of Dr. W. W. Keen.

It would be difficult to acquire anything more precious than this model of a crystal, which Pasteur made, labelled, and mounted with his own hands, to use before his sceptical audiences in demonstrating the nature of crystals from wine fermentation. The chemistry of this had been a stumbling block to scientists. No explanation of why one of two tartrate crystals, showing identical analysis, turned polarized light to the right, while the other turned it to the left.

Pasteur demonstrated his views with this model, in strenuous debate with his adversaries in 1862. This research and demonstration won him added renown as a chemist, and was the key to his future work. He unravelled the mystery of the cause of putrefaction and fermentation, and, in his own words, speaking to the Emperor, he said, "all my ambition is to arrive at the knowledge of the causes of putrid and contagious diseases" (1863).

Two years later, Lister first read Pasteur's writings proving that putrefaction was of germ origin, and made his first demonstration of the efficiency of carbolic acid in surgery (March, 1865). He gives all credit to Pasteur for his great

discovery. The world is indebted to Lister, however, for his undaunted bravery, his pioneer advocacy and application of this principle to surgery in the face of universal opposition.

In that year Pasteur began an intensive study of the cause of the decadent vintages of France. The outcome of this was a proof that deterioration of wine with deposition of tartrates, was due to a low-grade bacterial fermentation, which could be arrested permanently by heating wines sufficiently to kill bacteria, but not hot enough to alter the wine.



MODEL OF A TARTRATE CRYSTAL MADE AND USED BY PASTEUR. HEIGHT 8 INCHES

One after another followed Pasteur's intensive researches into difficult problems of national importance. He was first called upon to solve the mystery of the silkworm disease which was ruining the silk industry of France.

Pasteur solved the problem, found a remedy, and restored an industry. He then attacked the disease anthrax, which was ravaging the herds of cattle and destroying the leather industry. He demonstrated again the bacillus of anthrax, and furnished the cure for the disease. Hog cholera and chicken cholera then claimed his attention. Again he put his finger on the weak spot, and announced a cure. Finally the triumphant conquest of hydrophobia was

proclaimed. Though the bacterium which causes hydrophobia has not yet been discovered, its existence is assumed, and, based on that assumption, his remedy—the only successful remedy—has been applied.

His researches and proofs banished forever the claims of most of the scientists of his time, in favor of spontaneous generation of life.

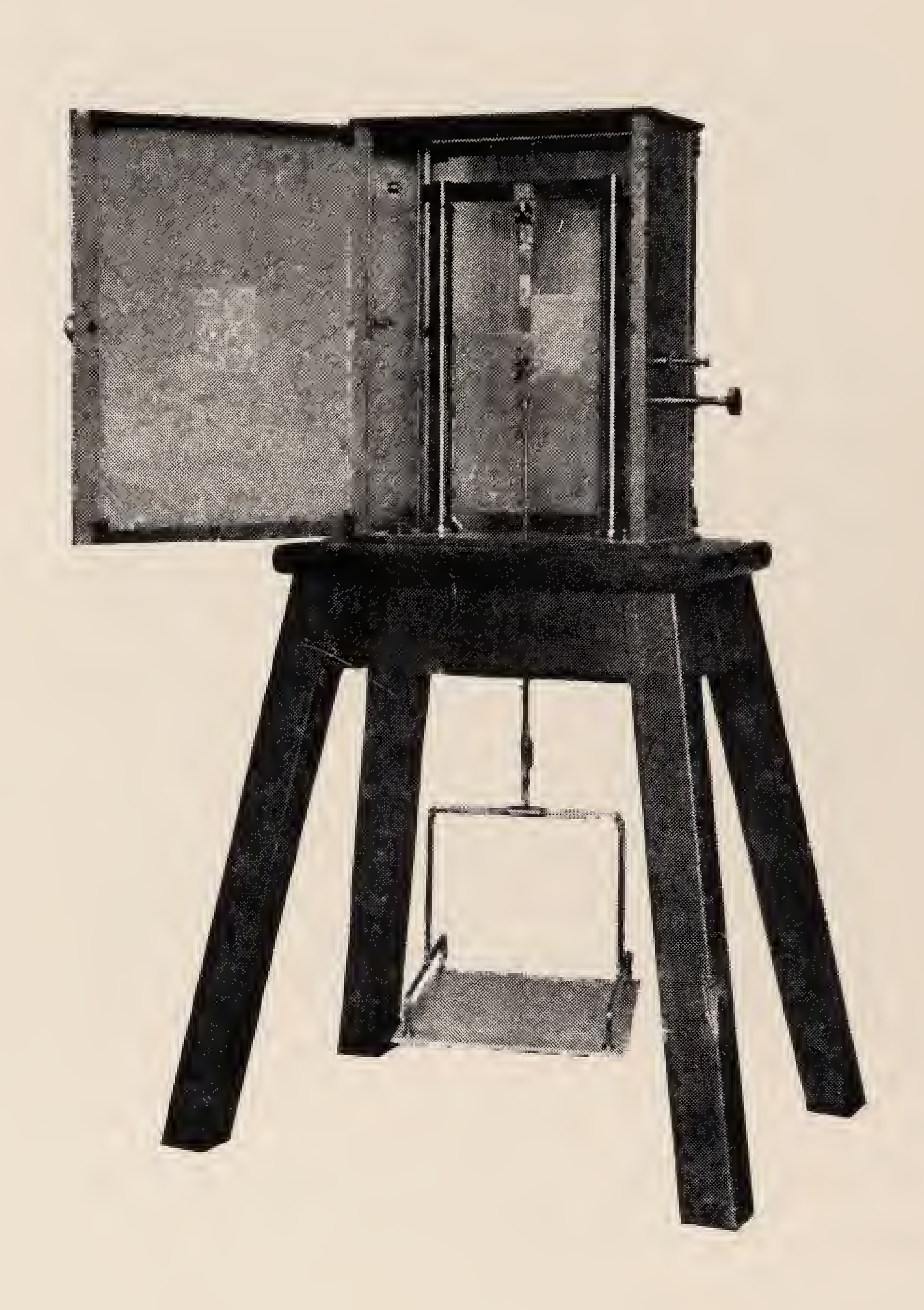


MME. MARIE CURIE

MME. MARIE CURIE

THE fifth memento is an instrument of precision, devised by Prof. Pierre Curie, at the Sorbonne in Paris, and used by him and by Mme. Curie. It was employed to determine the strength of electron discharge from radium, which Mme. Curie had just discovered by an ultra-scientific piece of detective work, little less than a romance.

This instrument illustrates, also, another discovery which Prof. Curie was elaborating before that time, namely, the fact that crystalline substances, when compressed or expanded, emit electrons, due to the strain put upon them. In this instrument there is a long slice of a quartz crystal, held by one end and weighted at the other. An electroscope, placed opposite the face of the crystal records the discharge of electrons, in exact proportion to the weight put upon it. This is known as the "Quartz-piezo-electric" apparatus. This very instrument was used by the discoverer of radium in her early work, and is presented to the College of Physicians by Mme. Curie in response to an appeal for a souvenir of her work. It may almost be said to be the first instrument ever made actually to weigh, as it were, the smallest divisions of the atom, the electrons. To view this instrument is to be enthralled by the spirit of research which its personality inspires.



Translation* of Mme. Curie's Description of the Apparatus She Gave to the College of Physicians, Philadelphia

In this apparatus is utilized the property which crystals of quartz possess of acquiring an electric polarization following a deformation.

This phenomenon of "Piezo electricity" thus manifested in quartz was discovered by Pierre and Jacques Curie and



MME. CURIE SEATED BEFORE A MODIFIED QUARTZ-PIEZO ELECTROMETER (1921)

recognized not only in quartz but generally in all crystals not having a center of symmetry.

The lamina of quartz used in this apparatus has a thickness of about one-half millimeter. Its surface is perpendicular to one of the three binary axes of the crystal. It is a rectangle whose shorter side (about fifteen millimeters) is parallel to the third optic axis, so that the longer side (six to ten centimeters) is perpendicular to this axis. The two ends of the

*Translation by Prof. A. W. Goodspeed

lamina are fixed in clamps of which one is used to suspend the lamina while the lower clamp carries a pan in which weights can be placed. When the pan is loaded there is exerted on the crystal a tension in a direction at once perpendicular to the third axis and to the second axis. This tension has the effect of setting free on the two faces of the lamina quantities of electricity equal and opposite in sign which it is the purpose to collect. For this the two faces of the lamina are covered with tinfoil or a deposit of silver. These conducting armatures are insulated by grooves placed opposite each other at the ends of the lamina. One of the armatures is connected with the earth while the other is insulated. When a weight is placed on the pan a definite quantity of electricity and of a given sign is set free on the insulated armature. This quantity "q" is proportional to the stretching weight F; it is expressed by the formula $q = \frac{klF}{e}$ where l is the length of the lamina, e the thickness of it, and k the piezo electric modulus for quartz.

When the weight F is lifted the quantity of electricity set free on the insulated armature is equal and of opposite sign to that which is obtained in putting the weight on.

Such a lamina which is really a very constant electric standard may serve to measure currents of feeble intensity such as those which are produced in ionization chambers by radioactive substances. For this purpose the insulated armature is joined to one of the quadrants of an electrometer the other one being grounded. The insulated quadrant is also attached to the source of electricity which produces the current that is to be measured (for example to the insulated electrode of the ionization chamber).

One can compensate very exactly the current to be measured and keep the electrometer at zero by lifting gradually a weight F put on the pan. The current strength i is given by the formula $i = \frac{q}{t}$, where t is the time measured by a chronometer during which the current i has been compensated by the raising of the weight F. Thus this current i can be known in absolute value with great precision.

This way of measuring was used continuously by Pierre and Jacques Curie in their researches on feebly conducting bodies. I used it afterwards in my researches on the radiation from compounds of uranium and of several other substances. Later we have constantly used it, Pierre Curie and I, in the measurement of radioactivity made necessary by the new method of chemical analysis which has served us in the separation of the new radioactive substances, radium and polonium.

It can be concluded then that this method of measurement has rendered very great service.

The piezo-electric quartz apparatus is still continuously used in the Curie laboratory. It is employed by the investigators and by the students who easily learn its use. The magnitude of the currents which can be thereby measured varies within wide limits.

The apparatus which I offered to the Cabinet of the College of Physicians of Philadelphia is one of the first models made. It is one of two which were used by us in our associated work during the first years of our researches on radioactivity.

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THE HISTORY OF THE PREVENTION OF PUERPERAL FEVER*

BY

MILES H. PHILLIPS, M.D. (Hon.), B.S., F.R.C.S., F.C.O.G.
Emeritus Professor of Obstetrics and Gynaecology,
University of Sheffield

This title having proved too ambitious a one for a lecture of an hour's duration, I have found it necessary to restrict my subject to a theme which can be indicated by the following words from Geoffrey Chaucer's *Canterbury Tales*—the words, written in 1389, with which the Manciple admonishes the drunken cook:

> " Hoold cloos thy mouth man
> Thy cursed breeth infecte wole [will] us alle."

Consideration of the study of the development of a therapeutic or a prophylactic measure will often be found to strengthen our intention to employ the measure in question.

The Principle of Contagion

The history of the prophylactic measure which I shall later on advocate may be held to begin about the middle of the nineteenth century. At that time a fundamental principle, that of contagion, was at last accepted by most of the leading obstetricians of the day. This theory had been long since suggested by Alexander Hamilton, in 1781, demonstrated by Alexander Gordon, in 1795, and more recently supported by Oliver Wendell Holmes, in 1843. It suits my purpose to cite only one of these converted authorities, one who had already conferred a great boon on parturient women by the introduction of chloroform.

In the discussion which followed a paper on puerperal fever read by Dr. Arneth of Vienna before the Medico-Chirurgical Society of Edinburgh on April 16, 1851, Dr. James Y. Simpson said: " But in this country we do not believe that the disease is usually propagated directly from individual to individual, but indirectly, through the medium of a third person ; and that person generally the

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* The Lloyd Roberts Memorial Lecture, delivered at St. Mary's Maternity Hospital, Manchester, on November 10, 1937.

[559/37]

medical attendant or nurse." In the same speech Simpson confesses that in 1836, when he had his first experience of puerperal sepsis in his own practice, he had "no full and proper belief in the contagious propagation of puerperal fever." Otherwise, he leads us to infer, he would not have gone from active participation in necropsies in two cases of fatal puerperal sepsis to four cases of midwifery, all of which became infected.

It should especially interest a Manchester audience, and particularly those who are members of the staff of St. Mary's Maternity Hospital, to hear or recall that Simpson had been not a little influenced by reading an account of an outbreak of puerperal sepsis in the district maternity practice of the Manchester Lying-In Charity—the forerunner of the present-day St. Mary's Maternity Hospital. Simpson had read of this in a letter published in the *London Medical Gazette* in 1832—under the heading "Is Puerperal Fever Infectious?"—by Dr. John Roberton. Dr. Roberton was appointed to the hospital staff in 1827, and he was the last member to bear the title of man-midwife, this being changed to surgeon in 1828. His letter had been written in response to a communication to the *Gazette* by Dr. William Campbell, and it is advisable to quote directly from it, as Simpson, apparently trusting to memory, is inaccurate in not a few of the figures he gives. Dr. Roberton begins thus:

"Sir.

"The letter of Dr. Campbell on puerperal fever, which appeared in the *Medical Gazette* of December 10, has recalled my attention to certain facts in my possession, calculated to throw some light on the query which heads this communication.

"'On the question of infection' (Dr. Campbell observes) 'I am as much as ever impressed with the belief that unless the practitioner has been engaged in the dissection of the bodies of those who have fallen victims, the disease cannot be conveyed by him from females labouring under it to others recently delivered; but if he have been so engaged, I have strong reasons for believing that he may be the means of propagating it.' My experience," Roberton comments, "is not in unison with this conclusion. On the 4th of January last [1831] a meeting of the medical officers of the Manchester Lying-in Charity was summoned in consequence of a great mortality having occurred, during the four preceding weeks, among the patients of one of the midwives. The circumstances we found to be these: Mrs. A. B., a midwife in great practice among the patients of the Charity, had on the 4th of the preceding month delivered a poor woman, who soon died with symptoms of puerperal fever. From this date

to the 4th of January inclusive—exactly one month—this midwife delivered thirty women residing in different parts of an extensive suburb, of which number sixteen caught the disease, and all of them ultimately died. These were the only cases of puerperal fever which had for a considerable time occurred in Manchester. The midwives, commonly twenty-five in number, deliver, on an average, ninety women per week. Now of this number delivered during the month in question, none had puerperal fever except the patients of Mrs. A. B. Yet all this time this woman was crossing the other midwives in every direction, scores of the patients of the Charity being delivered by them in the very same quarters where her cases of fever were happening. . . .

"The decision of the medical officers of the Charity was to the effect that Mrs. A. B. should abandon her practice for a short period, and go into the country."

Dr. Roberton concludes:

"The fact that sixteen cases of puerperal fever occurred in one month in the practice of a single midwife, while the patients of the other midwives were exempted from the disease, leads naturally to the conclusion that this midwife was the *medium* of communicating (I take not upon myself to say *in what manner*) the malady from one woman to another —from one affected with the fever to another in health."

The modern conception of a carrier had not of course been considered in those days. Within the last few years I myself have taken a small part in the investigation of two similar epidemics in the practices of one only of each of two groups of midwives—both of whom had clean records for several years. In each epidemic it was clear that some of the patients were infected during the puerperium and not at the labour. In each instance haemolytic streptococci were found in the throats of the midwife, and both were cured by removal of the diseased tonsils.

Simpson came to the conclusion that the unfortunate midwife in question must have been, unlike the other midwives, "connected with some form of that morbific principle or virus to which pathologists give the name contagion." No one at that time had any conception of the nature of that virus. Some even held it could never be known. Charles Meigs of Philadelphia, a bitter opponent of Oliver Wendell Holmes's views, wrote in his *Treatise on Obstetrics*, 1856:

"The student will naturally be desirous to learn, if childbed fever be really a contagious disease, what the principle of that contagion is; and I apprehend that here he shall have to rest content with the *sound* of the word contagion, a word which, being interpreted, means communicable from person to person, or by individual to individual. This is the whole

meaning of the word ; for, as to how, and the what, no man hath yet obtained the least definite notion, since no man hath known or can know what a miasm or a contagion is. Miasm and contagion are words, nothing more: they represent no precise material idea of the mind."

Dr. Roberton's account of the Manchester epidemic had been previously cited by Oliver Wendell Holmes (1843).

The High-pressure Sterilizer

It is also of great interest to record that John Roberton played a small part in an investigation which led to the invention of the high-pressure sterilizer, so essential to modern aseptic technique. Dr. William Henry, the famous physicist (1775–1836), also of Manchester, was making experiments on sterilization by heat, at the request of a cotton importer, in the hope of preventing the introduction of plague in cargoes of Egyptian cotton landed at Manchester. Dr. Henry (1831) states that "the most important point to be ascertained, and that on which the utility of the inquiry hinges, is whether temperature below 212° Fahrenheit is capable of destroying the contagion of *fomites*." To test the effect of different temperatures, for varying periods of time, Henry made use of fresh vaccine lymph. Among others, Dr. John Roberton, "one of the surgeons of the Manchester Lying-In Hospital," supplied Dr. Henry with the vaccine lymph. The double-jacket steam sterilizer was devised as the direct result of these experiments.

Thus this powerful means of destroying the cause of contagion was invented and in use thirty years and more before it was proved that the actual fomites were the micro-organisms of Anthony van Leeuwenhoek, microscopic protozoa which he had discovered—in water in 1675, and, in 1681, in material from the human mouth. It was ignorance as to the nature of these fomites—of the "precise material" of Charles Meigs, of the body or substance which could be conveyed by a third person from one patient to another—that had long delayed the wide acceptance of the theory of contagion. The final acceptance had been actually based on circumstantial evidence alone.

Years were to elapse before the elusive and, as it proved to be, microscopic malefic object was discovered, although, one is amazed to find, the transcendent brain of William Harvey had in 1651 used the term "fomes" and had conceived the idea of "seeds of epidemic and contagious diseases" which "propagated to a distance through the air," and "in a hidden fashion silently multi-

plying themselves by a kind of generation . . . spread destruction far and wide among man and beast."

Skoda of Vienna, inspired by the theory of Semmelweis that poisonous animal matter was introduced by the hand of the accoucheur into the genital tract, suggested to Semmelweis in 1849 that the problem should be investigated by experiments on animals. By means of a brush at first, later a syringe, exudate from a case of endometritis, or pus from an abscess, was introduced into the vagina and uterus of rabbits recently delivered. Later the post-mortem appearances were studied, but in the absence of microscopical examination nothing of real value was learnt.

The Indictment of Bacteria

It was Louis Pasteur who initiated the investigations which were to lead to the indictment of bacteria or microbes as the long-desired *materia peccans* of contagion. The study of diseases of grapes, of silkworms, of cattle, had fired his imagination to "arrive at the knowledge of the causes of putrid and contagious diseases" in human beings. After investigating septic cases in the surgical wards of hospitals he studied cases of puerperal infection in the Maternité, finding in certain of them "a microbe in the shape of chain or chaplet, which lent itself very well to culture."

The description by Monsieur Roux of an occasion (March 11, 1879) on which Pasteur proclaimed this discovery is well worth recalling to our minds. "One day, in a discussion on puerperal fever at the Academy, one of his most weighty opponents was eloquently enlarging upon the causes of epidemics in lying-in hospitals: Pasteur interrupted him: 'None of those things cause the epidemic; it is the nursing and medical staff who carry the microbe from an infected woman to a healthy one.' And as the orator replied that he feared that microbe would never be found, Pasteur went to the blackboard and drew a diagram of the chain-like organism, saying, 'There, that is what it is like!'"

He had found streptococci in the lochia of dying patients and had cultivated them from the blood, taken both before and after death. This was a discovery which must have undermined the opposition of any remaining anti-contagionists, and one can appreciate the satisfaction with which Oliver Wendell Holmes, writing to Dr. Chadwick in 1883 on the contagiousness of puerperal fever, is able to boast: "But I shrieked my warning louder and longer than any of them, and I am pleased

to remember that I took my ground on the existing evidence, before the little army of microbes was marched up to support my position."

The new science of bacteriology thus arose, and was ardently pursued by a rapidly increasing army of investigators in all civilized countries. Other organisms were discovered, isolated, and proved to be the cause of rarer types of puerperal infection, most of which were much less severe and less frequently fatal than that caused by the streptococcus.

It is impossible, and really unnecessary for my purpose, to review the story of the discovery of these various organisms. This was admirably done by Arnold W. W. Lea (1910), also a member of the surgical staff of St. Mary's Hospital. The list he gives still stands: in addition to streptococci it includes staphylococci, the colon bacillus, pneumococci, the gonococcus, the bacillus of diphtheria, of tetanus, of typhoid even, the *Bacillus aerogenes capsulatus* of Welch, and the *Bacillus pyocyaneus*.

The Introduction of Antiseptics

The discovery of bacteria was quickly followed by Lister's introduction, in 1867, of the chemical antiseptic with which microbes in septic wounds or on the skin of the patient or the hands of the surgeon could be rendered inert. Lister, employing the method with meticulous care, was soon able to revolutionize surgical operative practice. Certain obstetricians—and one must mention Hayes of the General Lying-in Hospital, London, and Tarnier of Paris—convinced of the identity of surgical and puerperal sepsis, introduced antiseptics into their midwifery practice, with a striking reduction in the occurrence of infection in the maternity hospitals they controlled. However, we must not forget that many years previously Robert Collins of the Rotunda (in 1829) and Semmelweis in Vienna (in 1847) had used a solution of chloride of lime to destroy the unknown virus of infection.

The use of antiseptics soon became the first line of defence in the campaign against puerperal sepsis, and so it remains to this day. Many forms have been introduced since the days of Lister's carbolic acid. The search for the ideal antiseptic has a story of its own, which some consider is not yet complete ; many others are perfectly satisfied with the one of their choice.

Although the incidence of puerperal sepsis has been greatly diminished, the dread disease has by no means been eliminated. Sporadic cases are of not infrequent

occurrence, and even epidemics occur in hospital as well as in private practice. Puerperal sepsis is still one of the chief causes of puerperal mortality. Some authorities maintain that this is only the consequence of the neglect or the inefficient use of the antiseptic ritual. Others, doubting this simple solution of a grave problem, have with infinite pains searched more and more deeply into the life-history of the microbes chiefly concerned, and particularly into their habitat—the lair in which they must be destroyed or between which and the woman in labour an effective barrier must be set up. Since Pasteur's day it has been recognized that streptococci cause the great majority of the serious and fatal infections. They have been intensively studied by devoted specialists, and gradually the complexity of the nefarious clan has been revealed. Streptococci are subdivided according to the way in which they grow: some are haemolytic, others have no action on blood, while others will only grow in the absence of oxygen. Of the haemolytic strains only one group (Group A) is capable of causing severe infection in human beings, and this group is further subdivided by intricate serological means into about twenty-five distinct types. Some half of these known types have been found to play a causative part in puerperal infections.

The history of these investigations is beyond my purpose and, indeed, my powers. I have chosen to attempt to unravel the story of the tracking of the villain to his chosen lair and the provision of a means to intercept him at its exit. I refer, of course, to the human throat and the surgical face mask.

The source of the problematical virus had for long been a matter of speculation, the most favoured being decomposing animal matter associated with necropsies and dissections, cancers, and surgical wounds, especially where midwifery cases and cases of general disease were housed under the same roof. Semmelweis and Holmes both laid down rules of conduct against these dangers. The means of conveyance were debated ; clothes, the hands, the atmosphere were accused.

Charles Meigs, the anti-contagionist already quoted, ridiculed the idea: he tells of

"another friend of mine who had been chased, so to speak, by a series of such cases, seventy in all, left the city, was absent many days, and on returning, shaved his head, got a new wig, new clothes, new gloves, new pencil. He went into a bath, was washed clean, dressed himself, and then visited and assisted a woman in labour who was seized next

day and died." If the man "was poisonous," says Meigs, "how was he so? Everything except the man was new. He could not have carried the atmosphere of his last patient's chamber with him to the country, keep it about him like an invisible cloud," and "then carry it into the last patient's chamber to destroy her with exhalations more pestiferous than the breath of Cacus."

By the irony of fate Meigs's satirical flights of imagination had brought him near the truth: the "new pencil" wetted by the lips might have infected the doctor's fingers; the "exhalations more pestiferous than the breath of Cacus" may well have conveyed virulent streptococci. In fact this was so; for Meigs's friend was no other than the unfortunate Dr. Rutter of Philadelphia, who within five years had ninety-five cases of puerperal infection in his practice, with eighteen deaths. It is known that he suffered from ozaena due to chronic rhinitis.

Many years later, in 1924, two outbreaks of pyrexia at the Portsmouth Municipal Maternity Hospital were proved to be associated with the presence of a pupil midwife who suffered from atrophic rhinitis and in whose nose haemolytic streptococci were found.[1]

Relation of Streptococcal Sore Throats to Puerperal Fever

The discovery of microbes gradually led to the eclipse of mere conjectures; theories could henceforth be scientifically tested. The comment of Dr. John Clarke (1793) —that "it is a curious circumstance that before the attack of the epidemic of lying-in women at Paris in the year 1746, in the month of January, there had been an epidemic low fever, with an ulcerous sore throat"—has thus been illuminated by the discovery that certain members of Group A of the haemolytic streptococci can be much more readily found in human throats at the time of year when puerperal sepsis is most prevalent. Alexander Gordon, who wrote in 1795 on the "Epidemic Puerperal Fever of Aberdeen (1789–92)," prepared a set of tables showing the simultaneous prevalence of "inflammatory sore throat." Fleetwood Churchill (1849) speaks of the "epidemic season," between November and May, and shows that the eighteenth century writers on puerperal sepsis—Leake, Armstrong, Campbell, Hey, Joseph and John Clarke—all agreed that the "puerperal fever prevails most during the winter and spring months."

Although streptococcal sore throats are most prevalent from October to May, demanding specially careful pre-

[1] *British Medical Journal,* 1924, 2 623.

cautionary measures in surgical and midwifery practice, they may occur at any season, and so the same precautions are actually always desirable. In my quest for the discoverer of this source of contagion I arrived at a paper by W. Hübener (1898) based on experimental work carried out at the Breslau Surgical Clinic of Professor Mikulicz. Hübener begins by referring to the pioneer work of Flügge, reported in 1895. Flügge had not only proved that the micro-organisms found in the human mouth might be pathogenic, but had demonstrated the " surprising and extraordinarily important fact " (to use Hübener's own words) " that when speaking, coughing, and sneezing a spreading about of the mouth and nose secretions takes place. Even at a distance of several metres he had shown that agar plates were covered with colonies after somewhat louder and livelier speaking." Flügge urged the exclusion from aseptic operations of all persons suffering from acute catarrh.

Mikulicz, searching for an " absolutely germless " surgical technique and at this time experimenting with sterilized thread gloves, was deeply concerned by this newly recognized source of infection. He immediately set to work to parry it. In July, 1897, he described the " Mundbinde " (mouth bandage) which he was using for this purpose. This is, I believe, the first publication on the subject. The material used was the finest mull, " sterilized of course," he says, and " fastened to the similarly sterilized operation-gown."

Although Mikulicz claimed that he had quickly become accustomed to their use and " could breathe through them as easily as a lady who in the street wears a veil," we find that he had asked Hübener to search, by experiment, for a comfortable as well as a secure means of protection. In his lengthy paper Hübener describes his method of experimentation. An assistant whose mouth had been thoroughly rinsed with a diluted culture of *B. prodigiosus* spoke and coughed, at varying distances and angles, over appropriately arranged agar plates. The green colour of the prodigiosus colonies made it easy to distinguish the germs " spoken out from the oral cavity " from those deposited from the air.

Evolution of the Face Mask

These experiments led to the gradual evolvement of a metal frame—a modified Esmarch chloroform mask—with spectacle ear-pieces, carrying a double layer of close-meshed mull. As evidence of the exhaustive character of these pioneer experiments it must be noted that

Hübener demonstrated that the mask should be held at a distance of a few centimetres from the mouth, and this not for comfort only but to increase its efficiency as a filter. This is a requirement which is ignored in most types of mask, but it can be easily achieved by giving a snout-like projection, by means of a stiffened dart on each side of the simple oblong of folded gauze so much in use.

Concurrently with the investigations of Mikulicz and Hübener the problem was being studied in Paris. The famous surgeon Paul Berger read a paper " On the Use of a Mask in Operating " before the Surgical Society of Paris on February 22, 1899. He began with the statement: " For several years I have been worried as to the part that drops of liquid projected from the mouth of the operator or his assistants may exercise on the outbreaks of infection which one still sees from time to time under conditions of surgical asepsis which are apparently satisfactory." Berger's suspicions had been aroused by the association of a short series of cases of suppuration in clean operations with an assistant who was suffering from an alveolar abscess. The same mishaps occurred several months later, when he himself was suffering from a dental periostitis. His attention directed to the point led him to notice that drops of saliva were projected from the lips of the operator or his assistant even when isolated words, orders in monosyllables, were given. Aware of Flügge's discovery of the presence of pathogenic bacteria in the saliva, he had set to work to find a means of " shielding his operation wounds from this cause of contamination," even before Mikulicz had published his paper. In October, 1897, he began to wear a rectangular compress of six layers of gauze, sewn at its lower edge to his sterilized linen apron (he had a beard to safeguard) and the upper border held against the root of the nose by strings tied behind the neck. His investigations appear to have been purely clinical, but in the course of fifteen months he convinced himself that he had markedly diminished the incidence of sepsis after clean operations. His paper ends thus:

> " It is exactly because I realize that perfection in the carrying out of operations aseptically must not concern itself with any one point but with all, and must neglect no detail, that I have been so anxious to insist on a precaution, the use of which has contributed not a little to improve my operative results. I do not blind myself to the fact that this is too great a shock to custom for it to receive a much more favourable welcome than that accorded by the German

surgeons to an analogous communication by Professor Mikulicz."

His surmise was correct: in the discussion that followed a Monsieur Terrier scoffed at the proposal, saying, "I have never worn a mask, and quite certainly I never shall do so." However, in time surgeons did adopt the precaution, and probably the first English surgeon to insist, in a textbook, on the use of the face mask was that master of operative technique Berkeley Moynihan in his *Abdominal Surgery* (second edition, 1906). He pours ridicule on the scoffers "who claim to be satisfied with their results."

Berkeley and Bonney in their *Textbook of Gynaecological Surgery,* first issued in 1911, after testing by experiment the validity of the danger, stated their conviction that the surgeon and his staff should wear masks. Yet in their work *Obstetrical Emergencies,* even in the third edition of 1921, they do not mention the possibility of droplet infection. This illogical position was indeed shared by all, or nearly all, of us who have during the last twenty years practised both gynaecology and midwifery.

The Pioneer in the Use of the Mask

In seeking the pioneer in the use of the mask in obstetric practice I have come to the conclusion that Professor Benjamin DeLee (known at the moment to the American lay press as "Number One Obstetrician, U.S.A.") is entitled to the credit for this.

Let me tell the story in DeLee's own words, from a recent letter:

"I cannot say just when I first started to use face masks in obstetric practice. I believe it was certainly at the same time, or even before, the surgeons used them.

"Just about the turn of the century we had a small epidemic of puerperal infection among the mothers and the babies at the Chicago Lying-in Hospital Dispensary, the home service, which of course was astonishing.

"On investigation I found that one of the interns, who liked to teach and demonstrate to the students while he was delivering the women, had a slight salivation and little tiny droplets of saliva were present frequently at the corners of his mouth. All of the cases that got sick were handled by this particular intern, and one mother and one baby died of streptococcus infection.

"I made a careful study of this intern's nose and throat and found a short-chain streptococcus. I relieved him from service and gave him a position in the laboratory of a South

Side hospital. The epidemic ceased abruptly and we have had no trouble in this regard since.

" I immediately instituted rules and regulations regarding talking on obstetric cases (such as averting the face when talking over a patient so as not to spit upon her, keeping the hands away from the face and mouth while on duty so as not to infect them with saliva, not to attend a labour case if suffering from a head cold or sore throat, etc.), but I do not remember that I insisted on masks.

" The first record that I have of the use of masks is in 1907 while I was preparing the third edition of my book on obstetrics for nurses, which was published in 1908. There is a picture in this book of the doctor aiding the parturient to bear down, and he wears a face mask."

The first protection used by DeLee was " a thick scarf of cheese-cloth." Finding that spittle could be driven through the mesh of this he used thick towelling, and this again he fortified with a four-inch square of adhesive plaster during epidemics of colds or if he himself had a sore throat and had to continue at work.

Kanter and Pilot (1924) appear to have published the first account of a bacteriological investigation of the likelihood of droplet infection in obstetrical practice. It was carried out in the extern department of the Presbyterian Hospital, Chicago. They found " no evidence to support auto-infection from vaginal streptococci," but concluded that " droplet infection from attendants is possible and that the use of masks during delivery and the exclusion of those having sore throats from the delivery room and from attendance on puerperal women is clearly indicated."

Delay in the Use of the Mask

Apart from its use in Caesarean section there has been an astonishing delay in the employment of the face mask in hospital and, even more so, in domiciliary midwifery practice. It is sad to reflect that its adoption or more rigid use in this or that institution, on this or that maternity district, has so often been and still is the direct consequence of an epidemic, more or less rapidly controlled, in the hospital itself. It would appear that some even await the stimulus of legal proceedings.

Investigation into Hospital Epidemics

Many such epidemics have been laboriously investigated by bacteriologists especially skilled in the recognition of the various types of streptococci. It is only in this way that the origin or the originator of the epidemic or of the sporadic case can be detected and

indicted with a degree of probability almost amounting to certainty. The first of these thoroughly investigated epidemics was that which occurred in the Sloane Hospital, New York, in January and February of 1927. Of 163 delivered women twenty-four (15 per cent.) developed haemolytic streptococcal infections ; eight of these died. It was fully reported in the August number, 1928, of the *American Journal of Obstetrics and Gynaecology* by Professor B. P. Watson and Dr. Frank Meleney. A complete bacteriological examination of the hospital failed to demonstrate haemolytic streptococci in the air, on the floor or walls, in the operating room, in dressings, supplies, or water. The only place where streptococci were found, other than in the infected patients, was in the nose and throat of certain doctors, nurses, and members of the domestic staff. In the summary of these papers it was laid down that it is " important to exclude streptococcal carriers from maternity hospitals and to insist on complete masking by all in attendance on parturient and puerperal women." Thus one result of this epidemic was the much more rigid masking of both mouth and nose.

The Sloane Hospital Report aroused widespread interest in a source of infection which, as we have already seen, had been suspected by a few for years but had never before been strongly attested. The report was reviewed and warmly welcomed by Professor DeLee in the section of obstetrics of " The Practical Medicine Series " for 1928. At last he had powerful scientific support for the complete masking of mouth and nose, which he had already been employing and advocating in midwifery practice—against much opposition—for no less than twenty years.

In June, 1929, Nixon and Wright reported two fatal cases of pneumococcal septicaemia during the puerperium from University College Hospital, London. The second patient was a hospital " district nurse." By serological tests it was found that the throat of one of her attendants (who was suffering from a severe " cold ") yielded pneumococci of the same type—Type I—as the vagina, uterus, and blood of the woman. This is, I believe, the first case recorded in which the bacteriological evidence attained such a degree of probability. As a consequence face masks, which had been used at deliveries within the hospital since early in 1927, were made compulsory on the district.

Just one more instance of a compelled change of policy. In the early months of 1936 one of the most famous

maternity hospitals in the world, the Rotunda (see Annual Report), experienced an epidemic of streptococcal sepsis; four out of fourteen cases ended fatally. This coincided with a severe outbreak of streptococcal throats among the hospital staff and in the city. A full investigation was made, and among the conclusions we read: "Up to this time masks had not been used *in the maternity department*, but this epidemic and the knowledge of the mode of origin decided a change of policy."

Other Investigations

Many similar investigations have been made since 1928. It is impossible to enumerate or analyse them. However, I believe that all authorities would wish to give a special recognition to the work of Dr. Leonard Colebrook. In a chat with Professor DeLee in Chicago last autumn I was asked to convey the Professor's personal gratitude to "the Colebrooks" for their work on the sources of infection in puerperal sepsis. Dr. Leonard Colebrook has summarized this work; referred freely to that of others; and given his own conclusions in *The Prevention of Puerperal Sepsis*, published in 1936. This should be carefully studied by everybody—midwife, accoucheur, and administrator—concerned for the safety of childbirth.

In 1925 puerperal sepsis was the chief subject for discussion at the British Congress of Obstetrics and Gynaecology, held in London. The possibility of droplet infection was not even mentioned. Professor Whitridge Williams, who took part in the discussion, was impressed by the fact that in a series of streptococcal infections in his service 30 per cent. of the patients had had spontaneous labours without even a vaginal examination: this is a generally accepted proportion. He thought that all bacteriological evidence pointed to the rarity of endogenous auto-infection—all recent work has supported this view. After stating that there must be "some form of external infection which escaped recognition" he drew attention to the possibility of parturient women conveying the organisms on their fingers to the vulva or vagina. This is a danger well recognized by the supporters of the theory of droplet infection, and special precautions are laid down to thwart it: precautionary advice; a mask for the woman known to have an infected throat; careful and repeated cleansing of their hands; and, in my own practice, a double clove-hitch on the wrists to prevent the hands of the woman in twilight sleep from wandering to the vulva.

As the experts at this congress were oblivious to the droplet danger it is not surprising that the current text-books on midwifery contained no reference to it. And yet it would seem that, thinking logically, there is the same necessity for rigid aseptic technique in obstetric as in surgical practice. In the seventh edition (1912) of Hirst's *Obstetrics* the mask is considered necessary in major but not in minor surgery, and not in making obstetrical examinations and manipulations. This fallacious view has been held to a ridiculous extent. I have recently seen a gynaecologist wear a mask in an operating theatre whilst repairing a perineal tear of thirty years' duration, but disdain its use when suturing, in a labour room, a tear sustained ten minutes previously. Thus most of us acted less than ten years ago.

The English textbooks on midwifery were late in drawing attention to the danger. One of the best-known did not refer to it in 1925 in its sixth edition. In the seventh edition of 1931, however, we read that the human throat is the chief habitat of the haemolytic streptococcus, and that masks completely covering mouth and nose should be worn by all who are in attendance on labour and by nurses during the puerperium.

It will be asked: Is there evidence of benefit from the rigid use of these, together with other rational precautions, such as early detection and exclusion with appropriate treatment of attendants who have infected air passages and the immediate investigation and segregation of lying-in women at the onset of pyrexia? It is obvious that the masks must be efficient and that they should be in position before the hands are sterilized and before instruments and other appliances are removed from the sterilizer and laid out ready for use—preferably, indeed, before the labour room is entered.

I believe there is convincing evidence from several maternity hospitals where for the last five years or more there has been thorough bacteriological control of the work of the hospital—both indoor and outdoor. Comparison of the results in these two departments has yielded unexpected figures of great significance.

Dr. Joan Rose of the Elsie Inglis Hospital, Edinburgh, in a second report (1936) on "Bacteriological Control," says: "Observations on the incidence of haemolytic streptococci in lying-in women have been continued over a period of six years. The figures for the past three years show that while the general morbidity in hospital and on districts remains low, the pyrexial rate associated with

these organisms *is higher on the district than in the hospital.*"

Dr. R. G. Douglas (1937) states that all these precautions —and he lays great stress on efficient masking—have been rigidly employed at the New York Lying-in Hospital since September, 1932. He shows that the incidence of streptococcal pyrexia was two and a half times as frequent in the home as compared with the hospital deliveries. The same result has been obtained in comparable conditions in the practice of the Jessop Hospital, Sheffield, under the control of two whole-time bacteriologists.

The Report of the Obstetric Registrar of University College Hospital, London, for 1936 records that whilst two cases of haemolytic streptococcal infection occurred in 348 district deliveries there were no cases among the 1,034 deliveries in the hospital itself.

Dr. Leonard Colebrook reports that during the last five years the risk of developing a haemolytic streptococcal infection has been 30 to 40 per cent. higher for any booked case delivered in her own home than it is for similar booked cases delivered in Queen Charlotte's Hospital, and this in spite of the hospital having to deal with many already infected emergency cases. He continues: "I am sure that whereas the risk of sepsis in well-conducted maternity hospitals is growing less and less, we shall never have adequate control over the manifold dangers of familial infection in the overcrowded houses of the poor. I am glad, therefore," he adds, "to see the tendency for more hospital deliveries, and I think we should encourage and facilitate that movement."

Air-borne Infection in Dust

These results have led Colebrook and others to revive investigations into the possible danger of air-borne infection in dust. That the atmosphere was the chief vehicle of contagion was believed by many a hundred years and more ago. The belief was substantiated when Pasteur showed that the air was populated with microbes which caused putrefaction and fermentation. John Tyndall, the physicist, devised beautiful experiments and apparatus to demonstrate the presence of germ-laden dust in the atmosphere, and thus upset the theory of spontaneous generation. Lister attempted to counter the danger by the use of the carbolic spray, within the range of which surgical operations and even childbirth were conducted. Further bacteriological investigations drew attention away from

this to other more frequent sources of infection. But it is our duty to leave no possible source of danger unheeded.

The most recent work on air-borne infection has been carried out by William and Mildred Wells (1936) of Harvard University. The experiments are ingenious and the results impressive. In an air-conditioned room with an air centrifuge respiring at the human rate " sneeze-powder " was projected at will among a group of graduates. Bacterial samples of the air were collected by the centrifuge into blood-agar tubes. These workers demonstrate that " it would seem obvious that under conditions of crowding in enclosed rooms we are breathing one another's nasopharyngeal flora, as we once drank each other's intestinal flora in our water supplies." In searching for means to effect air sterilization they have found that germs are killed by ultra-violet rays. Floodlights emitting these rays are now in use in a corridor of the Children's Hospital, Cambridge, Massachusetts, and in the number of the *Journal of Thoracic Surgery* for October, 1936, there is a picture of an operation being conducted within the range of a battery of these lamps.

Charles White, the founder of St. Mary's Maternity Hospital, keenly alive to the dangers of " the foul and disagreeable air " of many hospital wards, strongly advocated ventilators and " every other assistance for clearing the wards of foul air." He would no doubt be delighted with the modern American air-conditioned hospital ward.

Conclusion

I fully realize that I should be doing a great disservice to a cause which I have much at heart if I left the impression that it is only against streptococcal infections, and in particular against the droplet danger, that I advocate precautionary measures. It is largely a matter of time that has led me to confine myself to this one danger.

The history of the discovery of infections by other organisms—staphylococci, the gonococcus, pneumococci, the *Bacillus coli,* the bacillus of Welch, etc.—and the special precautions required to anticipate and thwart each one of them, are of great interest and importance. It would be folly to neglect them while concentrating on one special danger. The most complete surgical technique is essential in really safe midwifery practice. New knowledge may lead to its modification, and it may be that a future Lloyd Roberts lecturer will find this paper

of mine useful in composing his own on "The Rise and Fall of the Obstetrical Face Mask."

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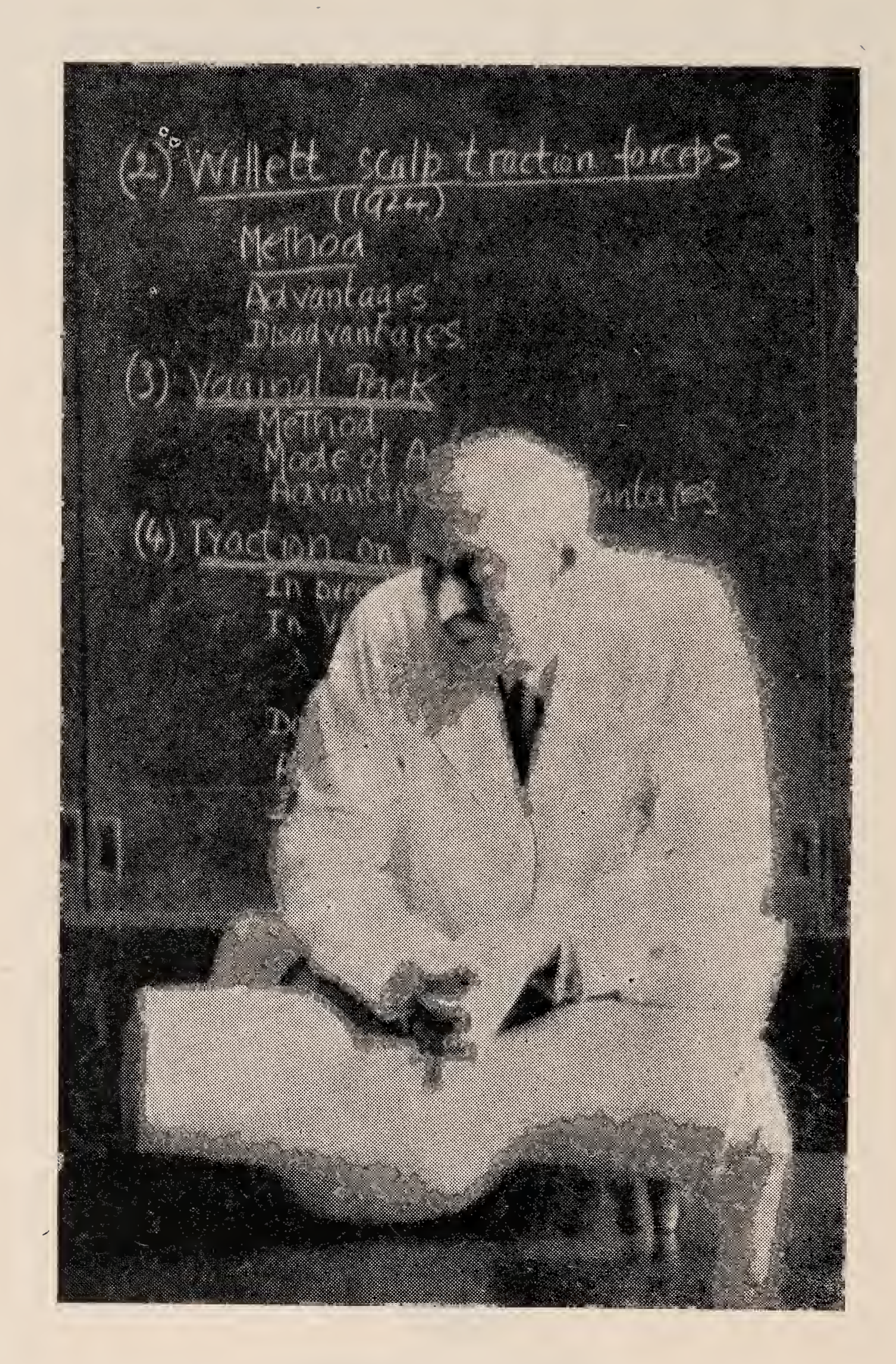
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PROFESSOR F. J. BROWNE

University College Hospital Magazine

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CHIEF CONTENTS

EDITORIAL

The Hospital and the Medical School alike have flung off the gloom of six years' war and put on a new coat of paint. They chose the relatively empty time of year, and caused minimum disorganization.

> " But with unhurrying grace,
> And unperturbed pace,
> Deliberate speed, majestic instancy,"

the painters pursued their chaos-creating course through the wards. Returning from your holiday, you would march beaming through the swing doors, carelessly ready to approach the most cantankerous and dismal of your chronics with a kindly enquiry, and find yourself faced with dirt, dust-sheets and distemper, with a huddle of lockers in one corner and a huddle of workmen in the other. If you paused in your shattered retreat you might discover an obscure note flapping from the outer door on a bit of sticking plaster, to say Ward 6 had removed to Ward 7. Heaven knows where Ward 7 went ! The first indication of encampment in the Medical School was the despoiling of Lecture room 1. The boards—those faithful friends of the wearied student when his lifeless pen nigh drops from his nerveless grasp (would it be the deep branch of the ulnar at fault ?) and a cavernous yawn threatens to engulf his whole being—those famous names, that provide a faint spark of distraction to keep him from the indignity of sleep—the boards were unscrewed and degraded from their noble stations on the wall, revealing all too painfully how once the paint had been cream. Once. A forest of iron scaffold poles sprang up among the benches, and a party of high-altitude explorers went aloft to peel off those fascinating scrolls of plaster

that have hung so tantalizingly above your head so long. In time, order reigned again, and there was left the untouchable aura of newness, some green blackboards and a silver lantern screen. And in time, too, order reigned in the refectory, the cloakrooms, and half the other rooms in the place, if not all ; and now there is only a little sporadic underground activity—men in the passage doing the strong man act on black iron pipe, and waving it about most dangerously near your vitals ; and sudden agile disappearances into a hole in the subway roof ; and have you looked in at the door in the wall by the bottom entrance to the lecture room ?—a mysterious shaft towers away into darkness, with a most alluring ladder all set about with wires, pipes, cables, coils, flexes, fuses, and tubes, disappearing dizzily into the heights, till one can imagine them all emerging into Surgical Unit, where one day someone will find them and tie them all off. But the painting put me in mind of a tale from Leatherhead. In the high and far off times, about when those who can round off their signatures with M.B., B.S., were sweating under the yoke of 2nd M.B., some redecoration of the house was undertaken (I know not why). And with much ingenuity and contortions, two technicians (of somewhat riper years) had, by piling table upon table and themselves on top, succeeded in coating with even and immaculate white the ceiling (even to a long-disused gas-point in the middle) of a certain gentleman's room—a certain gentleman known to all Leatherhead generations for a great talent in ambiguity, a stealthy tread and a remarkable vigilance, and to some for his artistic ability, albeit birth had blessed him with a right-sided cerebral dominance.

Now, well pleased with the results of their labour, the two brushed the whitewash from their eyes (and one from his moustache) and went home. The certain gentleman, however, was fire-watching that night, and with him a lady of ample proportions but misnamed. Five empty hours, from ten to three, was too much for them. . . .

Next morning the technicians came to see if the whitewash had dried ; it had. But there, soaring blissfully in its centre, in innocent nakedness (and did I mention the gas point in the middle of the ceiling ?) was the fruit of that certain gentleman's nocturnal activities—a cherub : fat, pink, and perfect, and inscribed around him in delicate feminine hand, "They also serve who only stand and wait."

As far as I know, there is still a patch on the ceiling where they painted him out.

* * * * *

The Students' Hostel is most unlikely to be open to them before January. That is not a promise that it will be then : until the Grafton Hotel is scrubbed (ten minutes) and painted (ether followed by flavin)

the nurses cannot inhabit it ; and tempting though the prospect might be, the students can scarcely inhabit the Nurses' Home till they vacate it. The only concrete sign of activity we have observed was on the part of two men on a ladder (with a policeman under it, on Friday, 13th, too), hastily and furtively posting a large notice for all who run to read. This informs would-be squatters and ardent Communists that the Grafton is now the U.C.H. Nurses' Home. I hope they will believe it.

* * * * *

We are sorry to record simultaneously the retirement or departure of five honoraries from the Hospital—Prof. F. J. Browne, Mr. Gwynne Williams, Sir Archibald Gray, Mr. Kisch, and Miss Dodds. We hope to publish some appreciation of the work of these people at U.C.H. in this or the next issue of the Magazine. The Medical Society is organizing a collection for a presentation to be made to them. Any contributions from old or present students will be very welcome. Cheques and Postal Orders should be made payable to The Secretary, University College Hospital Medical Society, and addressed to him at the U.C.H. Medical School, University Street, London, W.C.1.

* * * * *

We would like to extend a welcome to Prof. W. C. W. Nixon, who is succeeding Prof. Browne at the O.H. Professor Nixon, M.B., B.S., F.R.C.P., M.R.C.S., F.R.C.O.G., was educated at Epsom School and St. Mary's Hospital. Among other posts he has filled that of Professor of Obstetrics and Gynæcology at Istanbul, and afterwards at Hong Kong. We hope he will find English students and mothers (not to speak of babies) compare favourably with their Turkish and Chinese fellows. Certainly he would not have been foxed by the yellow baby a number of us heard of recently, in whom no other signs of jaundice could be found by most careful search—answer, a Chinese father.

We wish to congratulate Dr. C. E. Dent of the Medical Unit on his award of a Rockefeller medical fellowship. He will be leaving in October for one year, and has arranged to work for a start under Prof. Whipple at Rochester, N.Y. This centre offers a unique training in operative physiological technique and in the study of body proteins both by means of isotopes and the older methods. Dr. Dent has himself applied a new method to the study of protein metabolism, that of partition chromatography, which depends on the relative solubilities of individual amino-acids in various solvents absorbed on sheets of filter paper. When he returns here as a chemist and clinician fully equipped with both British and American methods we may expect great things.

NOTICE TO SUBSCRIBERS

THIS Magazine is published four times a year. The subscription is 4/- for one year, including postage and payable in advance. Cheques and Postal Orders should be made payable to the UNIVERSITY COLLEGE HOSPITAL MAGAZINE, and should be crossed.

All matters relating to communications for publication or otherwise should be addressed to Miss June. D. Cross, Editor,* c/o University College Hospital Medical Society, London, W.1.

Articles on general or clinical topics, verse or sketches are welcomed by the Editor. All contributions should be *on one side of the paper*, and should have at least one inch margin. To facilitate accuracy, names, prescriptions, obscure technical words, etc., should be written in block capitals in the manuscript. Contributors are not sent proofs except by request.

Communications relative to advertisements should be addressed to Messrs. S. and H. Fretwell, 92 Fleet Street, London, E.C.4. Telephone: CENtral 7961.

* Mr. L Hurst has now been elected Editor

BIRTH

HALL.—On June 14th, 1946, at Perth, Scotland, to Muriel (*née* McDonagh), wife of Dr. A. H. Hall, twins (two daughters).

OBITUARIES

OTTO MAY, M.A., M.D., F.R.C.P.
On Thursday, August 15th, aged 67 years.

THE sudden death of Dr. Otto May deprives the community and the medical profession of a singularly able and attractive personality, and will make a deep breach in the many circles of friends where his presence was always a refreshment and a delight.

Otto May was born in 1879, educated privately and at St. John's College, Cambridge, where he took a First in both parts of the Natural Sciences Tripos. Remaining in Cambridge, he became a demonstrator in physiology and a most successful coach. He also made a real attempt to enter research, and at the instance of Prof. Langley undertook a study of the mechanism of pancreatic secretion that is excited by the entry of acid into the duodenum. It so chanced that Bayliss and Starling were also engaged on this research problem, and their discovery of secretin, and the general conception of hormones that arose from it, solved the question to which May was, independently, seeking an answer. He thereupon came down and entered University College Hospital to take his medical degree. He was one of a small number of brilliant young men who entered the Hospital from Cambridge at about that period, and lent to the student body of their time an animation and a distinction that the present writer, who was their junior, still retains as one of his happiest recollections.

His hospital career was highly successful. He took the Atchison Scholarship and the Liston Medal, and, upon qualification, a British Medical Association research scholarship. He was later one of the first group of Beit Memorial Fellows, in a group which included the late Sir Thomas Lewis and Sir Edward Mallanby. For a time he worked in the laboratory of Sir Victor Horsley, and some original papers in *Brain* mark this period of his life. Turning then to clinical medicine he showed the same easy brilliance of which his earlier activities had given earnest, and would in time have doubtless made a mark for himself in consulting medicine, but shortly after becoming physician to the Evelina Hospital for Children, he made his last change, and entered what was to be his life's work, the field of insurance medicine. As principal insurance officer to the Prudential Assurance Company, he quickly made his mark on this field of medicine, in which he became a recognized authority, revivifying it and bringing it into touch with the advance of medicine. His contributions to the transactions of the Assurance Medical Society were of outstanding merit and gained for him the unusual distinction of honorary membership of the Association of Life Assurance Directors of America. Outside this work his deepest and most abiding professional interest centred round the problems of venereal disease, a subject to the elucidation of which he wrote a number of forceful, clear and valuable papers in various journals. At the time of his death he was chairman of the British Social Hygiene Council ; and he will be deeply missed by his fellow workers on this body.

Otto May was a fervently loyal son of his old Hospital, and his memory is perpetuated there by the U.C.H. MAGAZINE, of which he was one of the founders and the first editor. But it is not wholly or mainly of these fruitful achievements that those who had the delight and privilege of his friendship will now be thinking. Otto May was far more than the work he did. His friends will recall his perennially youthful spirit, which the passing years seemed not to have touched, his singularly attractive smile, and his whimsical humour, his modesty, those warm family feelings that made his home so pleasant a haven, his live interest in the humanities, and his complete integrity. The sympathy of all his friends will go out to his wife and to his two sons in their loss.

DR. T. W. PRESTON writes : I first became associated with Otto May in 1927, and worked with him at the Prudential Assurance Company until he retired in 1938. As an authority on assurance medicine he had a reputation which extended to all parts of the world where life assurance is conducted. He had an alert brain and considerable clinical acumen, although it was many years since he gave up clinical medicine ; there is no doubt that had he chosen another path he would have attained a reputation as a consulting physician. May chose to pose as something of a cynic ; but this was a thin veneer which deceived nobody. His friends mourn a loved and warm-hearted colleague.

[Reprinted from the *B.M.J.* of 31st August, 1946, by courtesy of the Editor].

DR. G. BURNHAM KING passed peacefully away at Addington Hospital, Durban, on Wednesday, May 29th, 1946. His illness was brief, and with an inner foreboding he wished to be cared for by those to whom he had devoted a lifetime of unselfish service.

Born in Port Elizabeth, he trained at U.C.H., and served through World War I and thereafter applied himself with entire enthusiasm to the care of the sick, regardless of himself. He befriended all who came to him and was a spiritual, cultural, and paternal adviser to all who sought his help.

During the last war again, although not fit, he gave the last ounce of his energy to the sick in general, and to casualties at the Royal Naval Hospital at Wentworth.

His enormous circle of friends testifies to the regard and esteem in which he was held. One and all would wish to extend to his wife, Gladys, his son, John, and his daughters Betty and Jennifer, their sorrow at his untimely end.

His life was a shining example of Service before Self.

[From Arthur C. Copley, F.R.C.S., 45 Anstey Buildings, West Street, Durban].

THE FIRST ISSUE

The first edition of the U.C.H. Magazine appeared in June, 1910. The Medical Society had just seceded from the Union Society of U.C.L. and needed an "organ of expression," which would "voice our deeds and aspirations." The foreword continues with a complex metaphor concerning the difficulties of the "operation" and how it was "carried to a successful issue." It ends with an appeal "for help in the essential after-treatment" from its readers.

The first article is by the late Sir Victor Horsley, who was then in his hey-day, on "The Localization of Cerebral Tumours."

This is followed by a very amusing article, "A Neglected Malady"—two quotations will suffice to stimulate the appetite: "Most of the symptoms would, however, be explained by assuming a vasomotor disturbance, affecting more especially the nervous system, and resulting in an anæmia of the higher centres, with corresponding hyperæmia of the lower ones."

". . . it is termed 'marriage,' and should be performed with the same care as a major surgical operation."

Other articles include a survey of the O.T.C. and its camp; a chronicle of important events and announcements: Sir Thomas Barlow of U.C.H. was elected to the office of President of the Royal College of Physicians that year; the Medical School won the first inter-hospital Billiard Tournament; Dr. F. M. R. Walshe passed his M.B., B.S., and T. Lewis was elected Beit Scholar to do research on the heart.

Sports results were as usual: the cricket team beat St. Mary's by an innings and 51 runs!

The Magazine ends as we began, with a review of "The Practice of Midwifery."

D.M.K.

It may not be generally known that bound volumes of all Magazines from the first on are now available in the Medical School Library.—Ed.

PROFESSOR F. J. BROWNE

THE retirement of Professor Browne marks the end of an epoch in the history of University College Hospital. It is just over twenty years since, in 1926, he came to the Hospital as the first Director of the new Obstetric Unit. At that time a radical change was taking place in the hospital—before the erection of the new Obstetric Hospital maternity patients were confined in their own homes, attended by a medical student with the aid of a handywoman. Only gravely abnormal cases were admitted to the Hospital, and then into the same ward with gynæcological cases. The provision of large numbers of maternity beds—and it must be remembered that U.C.H. has the largest maternity department of all the London teaching hospitals, made it possible for well over one thousand women to be delivered in the Hospital every year. There was much to do in the organization of this new department, and Professor Browne showed from the first his great ability as an administrator. New methods of asepsis and antisepsis were introduced, technique was standardized and, above all, the work of the antenatal department and of the antenatal ward became his chief preoccupation, and in this aspect of obstetrics he did pioneer work.

Professor Browne's early training and experience had fitted him admirably for his new and arduous task. Born in Ireland, he had received his medical education in Aberdeen, and had been for several years in general practice in a mining town in South Wales. Many are the stories he can tell of obstetric difficulties dealt with in the back bedroom or on the kitchen table. A brief period of service in the World War interrupted this work, and after the war he took the momentous step of leaving his practice and proceeding to Edinburgh, where he was first Research Pathologist and, later, Assistant Physician in the Maternity Department at the Edinburgh Royal Infirmary. There he established a great reputation as a teacher, did much original work, including some of great importance which has never received the recognition it deserves on the causes of stillbirth, and also came into contact with the many great men of the Edinburgh School. He was especially influenced by J. W. Ballantyne, who was the first in this country to realize the importance of antenatal care. He thus brought to his work at U.C.H. a wide background of experience.

His achievements as Director of our own Obstetric Unit will become a part of the history of obstetrics. Not only has an immense amount of original work been accomplished—much of it by the Director himself—but the organization has become a model for units elsewhere. His book, *Antenatal and Postnatal Care,* was first published in 1935, and is now recognized as the standard work on the subject. It is enough to say that

by 1946 it has already reached its sixth edition. But it is principally as a great teacher of obstetrics and gynæcology that Professor Browne will be remembered. His systematic lectures have been heard by generations of U.C.H. students, who will remember them, his inspiring ward visits, and the infinite pains he will take to teach the most junior student the fundamental facts of the subject.

Of his character little need be said to students of U.C.H. They will remember his kindness, his humour, his humanity. Many old students returning from distant parts of the world call to see " the Prof." and always find that he is delighted to see them, prepared to find time to talk to them, and to help them in their problems. Those of us who have been privileged to work with him as house surgeons and assistants have gained something we shall never forget. His meticulous attention to detail—indeed, the mark of true genius—his insistence on thoroughness and rejection of slipshod work, his readiness to accept new ideas and to try new forms of treatment, and his encyclopædic knowledge of the literature of his subject, have been a constant inspiration. The Obstetric Unit has been his whole life, and we know that he will miss it, as it will miss him. It is good to know that his retirement from the post of Director is far from being a retirement from active work, but an opportunity for seeking new spheres of usefulness to his branch of the profession.

From the O.H.

THE HISTORICAL METHOD IN THE STUDY OF OBSTETRICS

An Essay presented by Miles H. Phillips to the Carmarthenshire Obstetric Symposium on March 25th, and read to the Obstetric Class at U.C.H. on November 2nd, 1945.

When I accepted an invitation to talk to the Carmarthenshire Obstetric Symposium on the History of Obstetrics, I had no clear idea as to how I should deal with this enormous subject.

Recalling a maxim laid down by Sir William Osler that " By the historical method alone can many problems in medicine be approached profitably," it occurred to me that it might be most useful to consider the historical aspect of some of the technical problems of obstetric practice which are not infrequently discussed—usually in their modern aspect only—in our medical journals.

Only last year an interesting correspondence was started in the *British Medical Journal* by a letter published under the title, " Why Tie the Cord ? " This was written by a doctor from a Mission Hospital on the Belgian Congo. There the natives do not tie the cord : they simply divide it with a knife, and rub the cut end with some " native medicine." During several years he has seen no harm arise from this.

Hence his question. Other correspondents produced evidence in favour of leaving the cord untied, advising reliance on a natural closing mechanism in the umbilical vessels. One anatomist, however, who described and depicted the appropriate structure of the cord, thinks it wise to admit " that the mechanism cannot be depended upon," and advises ligation. The last letter published urged us to " Tie the cord," and the writer records a recent experience in which he had tied an " unusually thick and gelatinous cord in three places, using triple reef-knots firmly tied." Within two hours a very severe hæmorrhage from the cord occurred, and the infant died soon after. On reading this, I felt tempted to send a letter with the title, " Retie the Cord." So much for recent history. If one dips into the remote past, there is much of considerable interest to be discovered with regard to the origin, rationale and technique of the management of the umbilical cord.

The Prophet Ezekial, two hundred years before Hippocrates lived, and six hundred before the Christian era, was probably the first author to allude directly to this part of the midwife's office. In his XVIth Chapter, he likens Jerusalem to a neglected infant of bastard origin—the parents not being both Jews. His simile is conveyed in these words : " In the day thou wast born thy navel was not cut." This at least tells us how old is the practice of cutting the cord ; even before the days of the ancient Grecian midwives, who were named *ompholotomai,* navel cutters.

Exactly when the practice began cannot be known ; it must be a matter of philosophical conjecture.

A French Professor of Medicine, Jean Astruc, of Paris, published in 1766 a small book for midwives on *The Art of Midwifery Reduced to its Principles.* He devotes the first seventy pages to an excellent summary of the history of the subject, and he concludes the volume with a reply to an imaginary letter, from an imaginary philosopher, on the probable manner in which Adam and Eve behaved towards the umbilical cord and the after-birth of their first child. " Did they cut and tie as is the present custom ? " " Anticipating the most likely answer," he says, " you may object who had taught this to them ? They themselves had been born without a navel, and they had never seen the birth of a child." He continues : " But have they never tied and cut ? Then their children must all have died (this is recognised by all doctors). Therefore," he concludes, " the human race is lost." But as this is obviously not so, he proceeds to give four possible solutions of the question : How did they manage to do the right thing ?

The First Solution he suggests is that Adam must have been surprised at the birth of Cain to see a misshapen mass—known to-day as a placenta—attached to the child by a long cord. Thinking it part of the child, he would not detach it. It was ill-supplied with blood, as Eve fed herself on fruit only, and in the hot climate it soon shrivelled up. By the fifth or sixth day the cord detached itself. Adam profited by this, saw that the mass was not part of the child, and could and should be detached. So next time he cut Abel's cord, and saw a little blood trickle from it. He tied it, and we have in consequence, Astruc states, " the saving of the human race." That is his first solution.

The Second Solution is based on Adam's knowledge of the ways of animals, observed during the time he spent in the " Earth's Paradise." He had seen the mother cut the cord with her teeth. The author does not suggest that Eve ate the placenta, but he thinks that Adam judged that the cord could be divided in other ways, and this he did, even in the case of Cain, and seeing blood emerge from the part attached to the child, he tied it. Thus, Astruc sums up, " We have the ligature, and the cutting of the cord, and the human race is saved."

The Third Possible Solution is much more elaborate. I will condense his exposition of it. He supposes that " Adam disliked the placenta, and cord hanging from

Cain, and cut it. What do we conclude ? " he asks. " Cain's certain death, your philosopher would say, and such is the solution of all doctors who pretend to know. But they deceive themselves. That does not happen to calves and pigs." He then refers to several learned theses on the umbilical vessels in which the authors conclude that ligation of the human cord is not absolutely necessary. " On the other hand," he continues, " many other observers consider the ligature always necessary, and if one studies what is done to-day, one can judge what might have been done at the beginning of the world. He then conjectures that in Eve's time the cord was constructed differently from that of modern women. Eve lived frugally on fruit, and worked very hard, therefore her children would be stronger, and the vessels of their cords more elastic, and so able to contract more quickly than those of modern women, who eat much meat and succulent food, and lead an easy life, so that their children are more feeble, with slack fibres less fitted for contraction of the vessels. Hence," he argues, " we must tie the cord, whereas Adam was able to tear Cain's cord without any danger of bleeding." So much for his third solution : Adam first disliked the placenta, tore it away, and the cord became bloodless.

The Fourth Solution suggested is just a matter of instinct : God has provided that birds know how to construct nests by instinct, that quadrupeds instinctively do the right thing to the cords of their offspring, and therefore there is nothing surprising in God having instructed Adam what he should do to preserve his children.

So much for Astruc's philosophical considerations of the problem. It is well to note that they include the suggestion that the structure and therefore the behaviour of the cord may vary, and these variations, which in their grosser forms we can all confirm, may help to explain the different ways in which cords are known to behave, and hence the differences of opinion as to how they may be treated.

Nearly forty years before Astruc's Essay appeared, a significant observation was made by that great teacher of Anatomy and Obstetrics, William Hunter, whilst he was living as a student, with James Douglas (of the pouch of Douglas fame), and studying at St. George's Hospital. Hunter had sailed from Leith to London (narrowly escaping shipwreck) in November, 1740. He lived with William Smellie for several months, and then joined Douglas.

In his lectures on Obstetrics, which are only preserved in manuscript form (dated 1752), in various libraries, and have been quoted by several authors, he records the following observation, which is given as a footnote on page 20 of Merriman's *Difficult Parturition* (1820). Hunter maintains that " A ligature upon the navel string is absolutely necessary, otherwise the child will bleed to death, and when tied slovenly, or not properly, it will sometimes bleed to an alarming quantity. As we take such vast care to secure the navel string, you will naturally ask—how brutes manage in this particular ? I will give you an idea of their method of procedure by describing what I saw in a little bitch of Dr. Douglas's. The pains coming on, the membranes were protruded : in a pain or two more, they burst, and the puppy followed. You cannot imagine with what eagerness the mother lapped up the waters, and then, taking hold of the membranes with her teeth, drew out the secundines ; these she devoured also, licking the little puppy as dry as she could. As soon as she had done, I took it up and saw the navel string much bruised and lacerated. However, a second labour coming on, I watched more narrowly, and as soon as the little creature had come into the world, I cut the navel-string, and the arteries immediately spouted out profusely : fearing that the poor thing would die, I held it to its mother, who, drawing it several times through her mouth, bruised and lacerated it, after which it bled no more. This, I make no doubt, is the practice with other animals."

When we recall that William Hunter's policy was always to follow the line of greatest safety, it is not surprising to read his dictum : " A ligature upon the navel string is absolutely necessary."

Now, no study of the historical aspect of an obstetric subject is complete without William Smellie's views. He taught that " the cord should be tied, but tied with circumspection, making one turn if the funis be small, securing it with two knots ; but if the cord be thick, two more turns and another double knot." In his *Collection of Cases* he recounts three cord incidents—so interesting, instructive and entertaining that I wish to read them to you.

Case 207 (in Volume II of the Sydenham Society's Edition of Smellie's Work).—*Hæmorrhage from the Funis after Ligature.*—In the year 1726, I delivered a woman whose case was preternatural. Though the cord was thicker than usual, I thought that I had tied it sufficiently, and the child being laid by the fire, continued in that situation a good while before it was dressed, because the attention of myself and the attendants was engrossed by the mother, who was extremely weak and low. After she was recovered and laid properly in bed, I went towards the child, and was very much surprised to see so much blood lost, and to observe it still flowing from the funis. I no sooner discovered this than I made another ligature on the outside of the former ; and, pulling it very tight, the discharge lessened, though it did not cease until I had made a third. The child, which seemed to be healthy and florid when first born, was exhausted by this hæmorrhage, and continued weak and pale for several days, until it was recovered by sucking the mother. Thick navel strings [Smellie adds] require very firm ligatures, and a good portion of them ought to be left in the separation.

In a footnote, McClintock, the Editor, says : " The funis should be examined from time to time soon after birth, lest the child might lose any blood from it."

Case 208—*Funis broken off close to child's body.*—In the year 1744, having delivered a woman whose case was laborious, I desired one of the assistants to hold the child, before the funis was cut or tied, until I should move the mother a little further into the bed, that she might not run the risk of catching cold. The assistant who received it in a hurry and trepidation, pulled away so suddenly as to break the funis short from the belly ; when the midwife perceiving the child bleed excessively, took hold of the part, and pressed it firmly between her fingers and thumb. I had just room enough to make a ligature, and was obliged to take a stitch with a needle in order to secure it from slipping.

Case 209—*Funis is cut at wrong side of ligature : hæmorrhage consequent thereon.*—In the year 1745, after having delivered a patient of a small and weakly child, I tied and cut the navel string [this would be under the bedclothes in those days], and put the child into the hands of a woman who pretended to great skill and experience, and had come thither to superintend my conduct. I no sooner laid hold on the funis, than feeling the ligature upon it, I was convinced that I had separated the rope between it and the child's belly, and was not a little disturbed, as I had to deal with a censorious matron. However, I recollected myself in an instant, and desired to see the child, that I might know whether or not the navel string had bled sufficiently for by such a discharge I had often prevented convulsions in children. I immediately perceived the blood springing out from the arteries with great force, and before I could make a proper ligature, the child had lost three or four ounces ; by which evacuation it continued several days in a very weak condition. Indeed, when the child is large, and the head has been long compressed in the pelvis, I have imagined that by tying the ligature slightly at first, so as to let the funis discharge two or three spoonfuls, convulsions have been prevented ; but this was a small child, that passed easily, and could not well bear such an evacuation. Nevertheless, my mistake turned to my advantage with the knowing lady, who was very loud in my praise for having found out such an effectual and extraordinary method of preventing convulsions in children.

The famous Chirurgion Ambrose Parey, who was described by William Smellie as " the famous restorer and improver of Midwifery," also attended to detail in tying the cord. In his *Treatise on the Generation of Man*, published in Paris in 1573, he urges that (in the words of William Johnson's translation, printed in London in 1634) : " The navell string must be tyed with a double thread an inch from the belly. Let not the knot be too hard, lest that part of the navell string which is without the knot should fall away sooner than it ought, neither too slacke or loose, lest that an exceeding or mortal fluxe of blood should follow after it is cut off, and lest that through it (that is to say, the navell string) the cold aire should enter into the child's body—when the knot is so made, the navell string must be cut in sunder the breadth of two fingers beneath it with a sharp knife."

James Guillimeau, a pupil of Ambrose Parey, wrote a book on midwifery in 1609. An English translation of this, with the title, *Childbirth or the Happy Delivery of Women*, was published in 1612. He also is insistent that " the cord be tied but neither too tight nor too loose."

There is just one more author I wish to quote on this subject, as his dicta precisely agree with those I myself have taught and practised for a good many years. *The Principles and Practice of Midwifery*, by Alexander Milne, was published in Edinburgh in 1871. After some discussion on the subject we have under consideration, Milne sums up : " We certainly say tie the cord and tie it well, with narrow tape (not thread). Moreover there is no harm, but the reverse," he adds, " in tying it again after a time. The Whartonian gelatine contracts, and in an hour your ligature, though firmly applied, may become loose. We have done this," he says, " for a long time now, and saved ourselves much trouble ; and what is better conserved for some infants, no little blood. We have known," he continues, " some stupid nurses send for us after we had left the house, and perhaps had just got into bed again ; and all for a little funal bleeding, the result of gelatinous contraction, which they could have stopped. The most careful tying of the cord will not save you from being impeached with carelessness if blood to any extent drains away." He lapses into rhyme :—

" Little blood we know makes a terrible show,
And on *us* they are sure to father the flow."

" Besides," he warns us, " even if it dies from something else, and a good while after, this blood may get the blame. A good thing then is a repeated ligature after gelatinous shrinking " is his last remark.

It was my own practice to use narrow French tape, it being less likely than thread to cut the cord, and my maternity nurses were instructed to retie the cord after the infant had been bathed. So much for that question. Let us consider quite a different problem, one chiefly concerning the welfare of the mother.

In studying this, we will find that a hundred years were allowed to lapse before a brilliant suggestion was put into practice. We all know of the wonderful results which now follow the modern transverse lower segment Cæsarean Section. It was first done by Adolf Kehrer, of Heidelberg, in 1881, but an Englishman had suggested it, on sound reasoning, in 1786. William Wallace Johnson, of London, an old pupil of William Smellie, in his *New System of Midwifery*, first published in 1769, expressed great concern at the high mortality after Cæsarean Section. This he thought was chiefly due to " blood and humour falling into the cavity of the abdomen and pelvis, which will probably cause a fever and dyarrhœa by the putrefaction and irritation." He suggests that " Could an aperture be made with safety at the bottom of the pelvis, when hysterotomy is performed, in order to give vent to those humours, the probability of the mother's recovery would then, I think, be greater."

In the second edition,* published in 1786, he was more precise : " I would have," he said, " the incision made through the uterus transversely on its anterior side, as near the cervix as not to injure the bladder ; and this aperture being made of sufficient largeness, then to pass the end of a male catheter through a puncture made in the membranes to draw off the liquor amnii, etc., so that an effusion thereof may not gush into the general cavity of the abdomen. If these particulars are adopted, I should hope that better success would attend hysterotomy. As to their practicableness, I have consulted Mr. Hunter, and he admits them fully."

No more was heard of Johnson's proposition, there being no evidence to suggest that it was ever put into practice, until Kehrer did so, almost a century later. Johnson's suggestions are being precisely followed in these days with wonderful success.

Here is another precaution in Obstetric Practice on which, I believe, we can get guidance by referring a long way back. The history and development of ante-natal care is well dealt with in Professor F. J. Browne's valuable text-book. He quotes from William Smellie's two short chapters on " The diseases incident to pregnant women," but he is not able to record that Smellie included a vaginal examination in his ante-natal care. It happens that I can provide some evidence that this was so. Amongst the MS. notes which the late Professor John Glaister had made whilst writing his *Life of William Smellie*, and which his son kindly entrusted to me, was an extract from a very rare book, published in 1773, by an anonymous writer, under the title, *The Present Practice of Midwifery considered*. In the *Life* Glaister inserts several extracts from that book, but the significant one which I am going to read to you he did not include, probably, and I fancy you will agree, from a sense of modesty. The author narrates the following anecdote about Smellie :—

" A lady who was married while very young was, in her first pregnancy, told of the necessity of employing a man midwife, and of consulting him some time before she should be in labour, and she accordingly sent for Dr. Smellie, who was recommended to her by those who had employed him. When the doctor came he desired leave to examine her, which she had been taught to expect, and was ready to comply with. He put her into a proper attitude for that purpose, which she did not object to, as she had no suspicion of what was to follow. But when she found that the doctor had got—' The Lord knows where '—she started up and turning to him with the most foolish face of astonishment and confusion, ' Lord, sir ! what are you about ? ' The good old man (who of all men living was the fittest to be trusted with a woman in any situation or any attitude whatever) only smiled, and told her, that when she was more used to these things, she would not mind them."

It would occupy too much of your time if I were to attempt to produce evidence pointing to the desirability of making a routine vaginal examination, and that as early as possible in the course of every pregnancy.

There are many other problems in the practice of obstetrics on which one's views can be clarified, I believe, by a study of the historical sequence of written opinions, but they would take up more time than we have at our disposal. The best method of delivering the placenta, under varying circumstances, is one of these, and the use and abuse and even neglect of the abdominal binder after delivery is another.

The lecture was rounded off by short accounts of the upbringing and professional careers of two famous U.C.H. obstetricians, Daniel D. Davis and Sir John Williams, who were born in Carmarthenshire, and whose names are engraved on the tablet adorning a wall of the Obstetric Department lecture theatre.

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* There is a copy of this rare book in the Medical Library of U.C.H.

AIDS TO FORENSIC MEDICINE

(Revised Edition. Chapter xiii)

MRS. HUNMANBY was a dear old lady ; she lived in the cottage which stood by itself on one side of the village green ; she had two aims in life—the happiness of her cats, tortoiseshell Sam and the blue Persian Sue, and the upkeep of her small garden ; she was especially proud of her vegetables, her radishes having won a first prize on three successive occasions at the local flower show.

Tom Titmarsh, on the other hand, showed promise, even at the early age of fourteen, of fast becoming a very obnoxious individual. His chief delight was stoning birds with a catapult ; sometimes he killed them, sometimes he merely maimed them. One day Tom saw Sue, the Persian, loping across the green ; he had a sling at her, just to keep his eye in, and mortally wounded her.

The next week, Mrs. Hunmanby asked Tom Titmarsh to tea ; Tom had been invited before, the spirit of reform being strong in Mrs. Hunmanby. Tom did not mind going—he was always given a very good tea, and, in return, had only to mumble " yes " or " no " as the occasion seemed to demand. Directly he had finished, Tom departed, very pleased with himself, even having thanked Mrs. Hunmanby for her kindness.

He turned out of the gate and started to walk towards the village shop to buy some humbugs ; what was it that he had eaten that tasted so strong ? His mouth and lips felt quite numb and tingly ; he must have something to take the taste away. A few paces further on, Tom was forced to stop and lean against a fence for support ; a wave of nausea and giddiness swept over him ; his limbs were shot through with an aching cramp and he fell to the ground doubled up with pain ; the familiar trees and houses blurred before his eyes, and the whole world seemed to rock around him ; terrified and sweating all over, he could yet realize that he had been poisoned. He gave a feeble cry between his last gasping breaths, but no one heard.

No one heard Mrs. Hunmanby's end, either, for she, too, had had a salad tea, but *she* knew its contents. Do you ?

See page 85.

(Don't forget problem posers are inclined to include deliberate mistakes. Have you spotted one this time ?—ED.)

A SHORT HISTORY OF NEPHRITIS

Seated upon the convex mound
Of one vast kidney, Jonah prays
And sings his canticles and hymns,
Making the hollow vault resound
God's goodness and mysterious ways,
Till the great fish spouts music as he swims.

ALDOUS HUXLEY.

HIPPOCRATES knew the physical signs and symptoms of nephritis much better than the doctors living centuries after him. He knew the significance of the urine in connection with this disease as he describes it in his *Aphorisms*. He also realized the interrelationship between dropsy and diseased kidney : " Oedema following acute diseases of the kidney is without exception a very dangerous condition ; it does not lower the temperature, but causes severe pain and eventually leads to death."

Most commonly 460 B.C. is given as the year of birth of Hippocrates. However, archeology has in later years confirmed the view long held before its rise, that medicine in the Hippocratic writings had its origin in the older civilization, but the Greeks with a magic hand seem to have touched it and freed it of the magic and the mysticism and converted it into science, but they did it without any benefit from morphology at the time, for there was none, apparently, or very little, before Aristotle. It seems, however, we do get in line with some ancient primitive theories when we find Aristotle saying that the kidney, when present, exists not of actual necessity, but as a matter of greater finish and protection. Probably the same view is held by some contemporary clinicians, who always refer to an enlarged kidney as " the patient has a kidney."

It is well known to students of philosophy that Aristotle invented an entechy for every living thing, and with it he filled in the gaps of his knowledge of their physiology. The vitalists have clung to that plan ever since. No one has made more profuse use of this principle than Galen, who approaches the question of renal secretion thus : " However many there may be who are not disposed in any sort of way to allow control of the power of alteration which governs living processes, they are often compelled to assert what is very much opposed to evidence, but every cook knows that the kidneys not only secrete the urine but concoct it, since they can see the veins going to the kidney and the ureters connecting it with the bladder." He finds difficulty in reconciling the phenomenon of polyuria in diabetes with the idea it is due to excessive attractive power. From his remark that food has an influence on the intensity of this attractive power of the kidney we may conjecture that he had observed the effect of starches and sugars in diabetics. Galen thought that œdema occurred when the blood became too watery and the kidneys were unable to extract the water out of the blood vessels. The blood vessels distribute this excess fluid all over the body and this causes the appearance of hydrops. Galen's contemporary colleagues believed that œdema was due to a diseased liver, and as late as 1700 even Bonet supported this theory, though he claimed to be a pathological anatomist.

The knowledge of renal diseases was not very much enhanced in the Middle Ages. However, I would like to mention the surgeon, Saliceto (1201–77) from Verona, who was the first to discuss the " hardness " of the kidney and its causes. " The signs of nephritis which are occurring with hardening of the kidney are : diminution of the urine flow, swelling in the regions around the kidneys and hips with little pain ; enlargement of the abdomen and the patient will sooner or later suffer from œdema."

In 1608 there was published in Paris a small book, an edition of a Greek work on urines, *Peri Ouron*, with a Latin translation and notes by Morel (Morellus). I would like to quote from this work to show the trend of thoughts predominant in those days. In the first section, we have,

inter alia, an account of the origin of urine. After speaking of Hippocrates and Galen and their defective theories, the author attacks the problem himself. "It is right for us intending to teach of the urines to invoke Christ, the True God, that He may be our helper and guide. . . . In the first place, then, we are to define urine, then the part in which it is excreted, and, finally, the characteristics of genus, species and differentia. . . . Urine, then, is a percolation or filtration of the Blood—some call it a serous excrement, some an aqueous excrement, some the fluid portion of the Blood. There is indeed no real difference in the terminology—the urine is originated in the vena caudicosa, which is dispersed into the sinous parts of the liver, as it were, cut off from the other parts, the power in which completes its own work of making blood (it was considered that chyle was transformed into blood in the liver—the secretion of choler, yellow bile, was rather the work of the gall-bladder). The method of generating urine is as follows : The Blood being dispersed and a perturbation arising in it, whatever is light and tends upwards in it, like the excrement Yellow Bile, the small gall-bladder receives through its own duct, as it is close to the Liver ; what is earthy, and, as it were, feculent, the spleen draws through its duct and so the aqueous excrement is left in the Blood, this the kidneys receiving through the vena cava media, they form into the consistency of Urine. The vena caudicosa which manufactures the Blood throws it along with what tends to the dorsal Spine into the vena cava which lies toward the giblous parts of the Liver through certain narrow and hairy ducts. Since then Blood is thick in its consistency and is not able to penetrate freely through narrow passages, it is advantageous that there should be with it, the aqueous excretion, as by reason of the aqueous tenuity of this excretion, the Blood itself can without difficulty get through to the vena cava along with it. Then when this aqueous excretion is sent to the trunk of the vena cava which is close to the dorsal Spine from the upper to the lower part, the Kidneys having received this excretion, then treated and worked on it, and at length putting it into the shape of Urine, transmit it through the Ureters to the Bladder, the receptacle of this fluid. And even though the Blood is so hampered in its work that it fails to complete it, just as though prevented by some check or defect : and such an excrement is the aqueous one which we have named Urine. And so the Urines are sometimes thin and colourless, sometimes thick and white as though the Blood were made crude and the effective faculty of the Blood impaired, and the concoction rendered imperfect and one might say more crude. Sometimes, indeed, the Blood is very dark and, as it were, supereffervescent. Such, in fact, may its excrement be that by reasons of its operation, the urine is changed in respect of its appearance. Accordingly we speak of Urine "secundum naturam," which is made by the correctly adjusted apparatus of the Blood, and which indeed is called "secundum naturam"

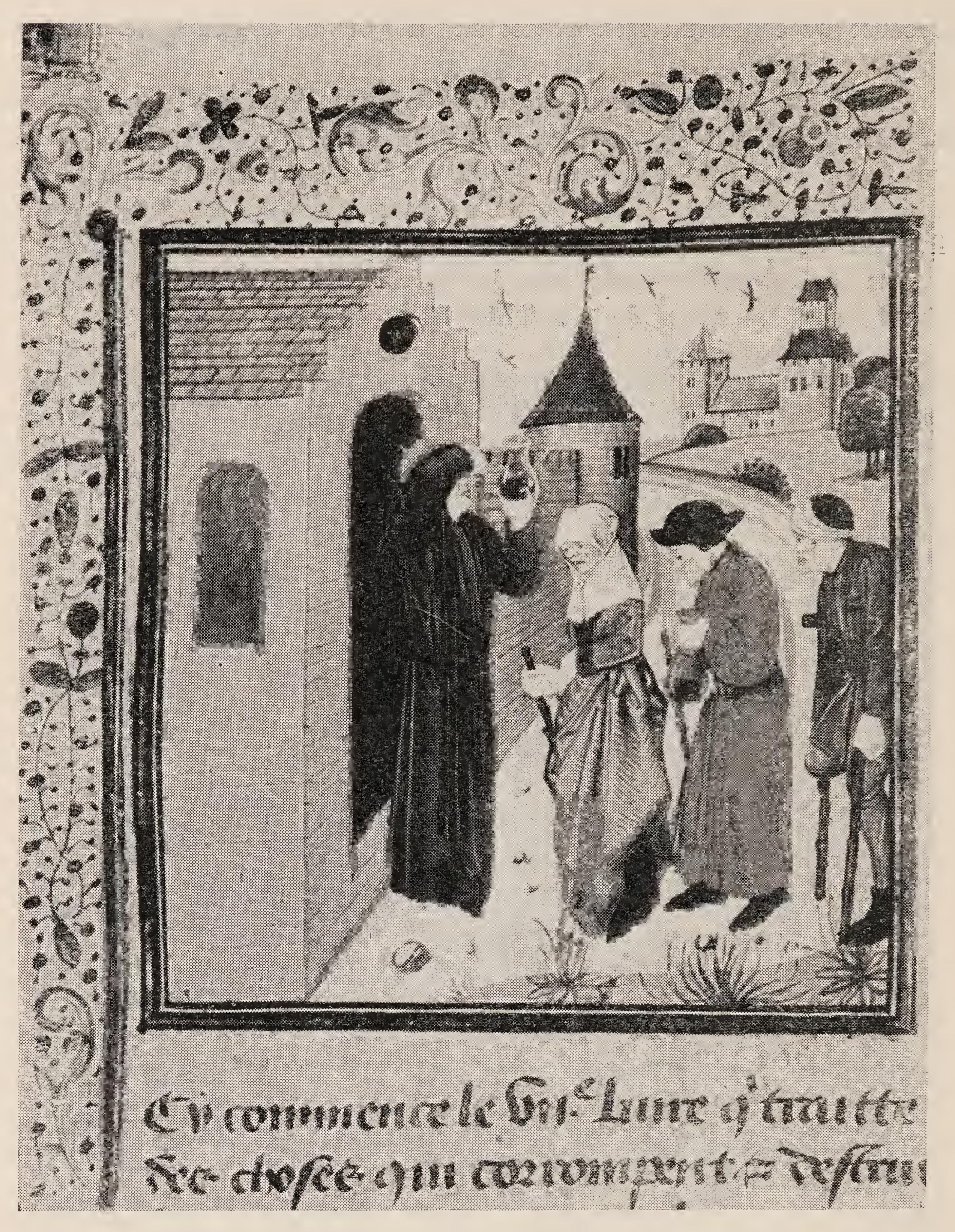
because we consider its excellence and defect not according to Nature but beyond it."

The first pathological-anatomical finding of a kidney changed by nephritis is recorded by Grafenberg around 1600. The case was that of a coachman called Fugger, who in July, 1594, suffered from hæmaturia, which was thought to be due to the bad roads he used. First, the urine-flow was diminished and then œdema developed. He died seven months later and was unable to pass urine during his last eight days. On autopsy the right kidney was white and " did not contain any urine."



Physician Examining Urine Brought by a Patient
Urologist's chart of the late fifteenth century. From Ketham, Venice, 1497.
(*Copyright : The Wellcome Historical Medical Museum, London.*)

Baptista van Helmont (1577–1644) in his work " On unknown hydops," states : " Only through the kidney are hydropsies caused and cured," and during the seventeenth century Marcello Malpighi, with his description of the anatomy of the kidney, laid a cornerstone in the history of renal diseases. At the same time more attention was given to the change of urine of patients who suffered from dropsy.



PHYSICIAN EXAMINING URINE BROUGHT BY PATIENTS
Sixteenth century manuscript.
(*Copyright :The Wellcome Historical Medical Museum, London.*)

The importance of the urine for diagnostic purposes was known for centuries. One of the most important subjects for a medical student was to master the art to match the colour of different urines against " standards," which were labelled and one could read off the diagnosis from the " urinal disks," which became the professional insignia of the doctor in some countries. The oldest of this urinal-disks which was recorded and

illustrated was credited to Maurus of Salerno, who lived in the twelfth century.

For centuries medical men kept watching urines, making their livelihood by keeping their patients alive on diagnoses based on this investigation, but it took the great brain of Wilke, in 1582, to warm it and describe what happened. He was rewarded with a professorship. The sixteenth and seventeenth centuries were full of doctors who kept boiling away urines night and day and describing what happened to the urine and to them. Occasionally a clear urine became cloudy and a cloudy one became clear and very few of them became professors. The first chemical analysis of urine was undertaken in 1670 by Thomas Willis. He noticed that in some fevers and other diseases the urine was so much " saturated," that it needed very little heating to solidify. Willis became Professor of Natural Philosophy at Oxford, where he discovered his famous "circle."

In 1694 Fredericus Deckers published in his *Exercitationes practicæ* a discovery which helped a great deal in the study of renal diseases : " I noticed that certain urines, when warmed, look like milk, smell like milk and even taste like milk. When I added to this cloudy solution some acid and allowed it to cool, I noticed that cheesy little particles dropped to the floor and an oily solution swam on top." This method of albumen precipitation with acids went quite unnoticed.

Seventy years later, Domenico Cotugno, in his book on *Sciatica* (!) says that " I have noticed that urines of patients with dropsy tend to coagulate when heated." Cotugno was the first to recognize the relationship between coagulable urines and dropsy. William Cruikshank went one step further and proved that patients with feverish dropsy show in their urine a substance which can be precipitated not only by nitric acid but also by heat, while in other cases of dropsy the urine does not precipitate.

In 1827 Richard Bright published the first volume of a collection of *Reports of Medical Cases,* intended to show the importance of morbid anatomy in the study of diseases. In this he gave the first account of those researches on dropsy with which his name is inseparably connected. As I mentioned above, the symptoms of dropsy, or watery swelling, had been known from the earliest period of medicine, and it had been shown that it was in many cases connected with a special symptom, namely, that the urine was coagulable by heat, from the presence of albumen. Bright, by his investigations of the state of the body after death, ascertained that in all such cases a peculiar condition of the kidneys was present. His claim to be the originator of the single-ward system for the observation of patients suffering from any given disease places him in the front rank as an organizer of clinical research along modern lines, and gives one the right to designate him the " Father of the Medical Unit

System "—a system which has in recent years been introduced into many London and provincial teaching hospitals.

Bright's work went a long way towards stimulating interest in the ætiology, pathology and treatment of nephritis and by 1900 our knowledge of nephritis had advanced considerably, and since that date a constant stream of articles on nephritis have made their appearance.

I am grateful to the Wellcome Historical Medical Museum for the permission to print the illustrations.

R. O. Scheibner.

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TO A RYLE'S TUBE OR CHANSON TRISTE

Oh, deary me, what a sad report,
The patient's tum's done what it didn't ought,
Since yesterday noon, no food has stayed
In the long, long tract which God had made.
So Sister and H.P. have a minor huddle
To think what to do to straighten the muddle.
The screens arrive and trolley, too,
And Sister rolls up her sleeves, one, two.
" Now, patient, look—what joy for you ! "
A wriggly red Ryle's comes into view.
Then several little remarks are passed,
Interspersed with occasional damn and blast.
The mouth is opened, and tube goes down.
Now and again Sister gives a frown,
Specially when hands begin to stray
Towards the horror, to take it away.
" No, no, don't touch." The anguished cry,
" It's where it should be, let it lie."
Up and down her gullet loudly flows
This and that and, oh, goodness knows.
The patient squeaks, I've had enough.
Lord, what a life, it's terribly tough.
Now we believe it's nearly all over.
We breathe again and think we're in clover.

In walks the Professor ; what a slip.
I beg your pardon, she'll have a drip.

(*From Bed* 9, *Ward* 15. (*a diabetic*).

THE MEDICAL SIDE OF AN AIRBORNE DIVISION

When, in June, 1943, Major-General Richard Gale undertook the formation and training of the British 6th Airborne Division, three Field Ambulances were, within the space of a few weeks, placed under his command.

Much hard work lay ahead for the Medical Services of this Division. Great strides had already been made from the time of the Bruneval Raid, the first British airborne operation, with which no organized medical service was taken. A Parachute Field Ambulance was formed in England in 1942, and accompanied the 1st Airborne Division to North Africa. There, the modern concept of an Airborne Divisional Medical Service was first built up, in the form of two Parachute Field Ambulances, one to each of the Parachute Brigades, and one Airlanding Field Ambulance, part of the Airlanding (or gliderborne) Brigade Group. But, so far, no operation had been undertaken employing the entire Divisional Medical Services, and this was what was envisaged for any future operation.

Much work, therefore, to reiterate, had to be done before the medical service would be fully trained for an operation " somewhere on the continent of Europe."

In the first place, very few officers or men had either seen action, or made a parachute jump. Then again, the training for an airborne medical unit was very different from that of its ground equivalent. Finally, many more volunteers had to be found, both to fill the ranks of the Parachute Field Ambulances and to provide the R.A.M.C. personnel attached to each Parachute Battalion.

The job, therefore, resolved into the following phases :—

1. To find the volunteers. Many of these came over with the existing units. The rest came from a country-wide recruiting drive, carried out in masterly fashion by the A.D.M.S. Many of these men were conscientious objectors, who had originally been directed to the Pioneer Corps. From there they had graduated to Bomb Disposal, having done which, and their units being disbanded, they elected to become parachutists and transfer to the R.A.M.C. !

2. To put everyone through their parachute training, which was time-consuming, and which involved, sometimes to the exasperation of the authorities, always to the joy of the parachutist, fourteen days' " jumping leave," at the end of the course.

So many accounts have been written of the training of the budding parachutist at Ringway that it would be superfluous to try to emulate these authors. Suffice it to say that the memories which stand out are : Hardwick Hall by moonlight —(" Hardwork Hall " to the blessed other ranks)—the culmination of Bess of Shrewsbury's architectural mania ; slogging at the double up Leg o' Mutton Hill, and frog-hopping on reaching the top—(" just to please me," the P.T. Sgt.-Instructor would always say !) ; eating, eating and eating—anything ; and drinking, drinking, and drinking—beer ; being incredibly filthy, and, sometimes, having a cold bath to get some of it off ; Ringway—the tarmac in the grey early morning light ; the slavish adoration—near idolatry—felt by the pupil for his stick commander Sgt.-Instructor—a man would have jumped through nothing into sweet F.A. to win his approval ; the tightness of the parachute harness on the body, and the weight of the 'chute on the back ; the horrible fug, compounded of a mixture of high-octane gas, sweat, and excited tenseness, in the aircraft fuselage ; the first amazement, when the parachute canopy opens—and loving the whole time there.

Everyone seemed to get married at this point, presumably either because they felt so fit, and had to work off their high spirits somehow ; or because, having brought themselves to the pitch of jumping out of an aircraft, the lesser plunge into marriage was scarcely noticeable !

3. Training. The first essential was to get everyone to realize that, in practice, their job had only just begun when they hit the ground. This was not easy, and

many a soldier had to be made to regret the day that he sloped nonchalantly off the Dropping Zone, lighting a cigarette as he went! Boredom had to be vigorously counteracted at this stage, for it was the preliminary period of "individual training," when the soldier learns his personal job, and it is difficult to correlate his work with mass parachute descents.

Perhaps a word here on the course of training a division would not be out of place. The recruit normally comes to his division from his regimental depot, where he has been taught the rudiments of his craft. In the 6th Airborne Division it was, however, at this time necessary to train recruits from other arms of the service in general R.A.M.C. work, right from the beginning, and to raise them to the standard known in the Army as Nursing Orderly Class 3. Having done this, the individual work of a Parachute or Airlanding Field Ambulance, or of a R.A.M.C. Parachute Battalion medical orderly had to be learnt—such as the composition and carriage of his equipment, how it is packed, and by whom carried.

When all this has been learnt, so that any individual job can be carried out by a number of different men, section training is begun. The Parachute Field Ambulance was, for example, at that time divisible into a headquarters, consisting of the Commanding Officer, 2nd in Command, R.S.M., Quartermaster and staff, two surgical teams, and the office staff, and four sections. Each section trained separately, under this scheme, either to form a small self-contained dressing station, with or without an attached surgical team, as the tactical situation might demand; or to split, and with one part to form one department of a main, or brigade, dressing station, and with the other part to reinforce the stretcher bearers at the H.Q. of the particular Parachute Battalion to which the section was attached. Each section had, under this scheme, its own affiliated battalion, whom they got to know, and with whom, when circumstances permitted, they dined and wined.

The self-contained dressing station, or A.D.S. as it was originally called, was also planned to go into action with one or two battalions, detached from their brigade, such as actually happened in the fighting in North Africa.

The next stage of training takes place on a unit basis. The sections collaborate to form a M.D.S. (equivalent to the A.D.S. of the land services). This consists of individual compartments, such as Reception, Resuscitation, Theatre, Minor Treatment, and Evacuation, welded into a composite whole, under the C.O. or 2nd i/c. At this stage, exercises are carried out, mainly on the ground, sometimes by air, on a scale equivalent to a battalion exercise.

Finally, training on a brigade, and then on a divisional, level is begun. Now, the lessons learned in the little section exercises, and the larger unit exercises, are put to the difficult test that the intricate timing, co-operation, and attention to small details, which the movement and deployment of a large body of troops, especially by air, requires. No mention has been made of the Air Force side of the team; but this, of course, requires as much preparation and training as does the Army component. It is in these big brigade and divisional exercises that it finally becomes apparent whether all the work that has gone before has been rightly directed; and usually, also, there is by this time the sense of excitement and urgency of a coming operation to spur on the backward!

During the section training period, which occupied the end of 1943, and the first two months of 1944, life was, therefore, better for the troops than it had been during the laborious period of individual training, with its long hours of lectures, and packing and repacking of equipment. The wood began to become visible as a whole, and the individual trees merged into a pattern, which became more complete with the first full-dress brigade exercises in March, which were, in fact, detailed rehearsals for Operation Overlord, the invasion of Normandy. Finally, the 1st and 6th Airborne Divisions took part in a massive Corps exercise in the early summer.

Both divisions had been hoping to have the honour of taking part in the invasion, and it was with high spirits that the 6th learnt that that honour was to fall to them, since the 1st was not yet at full strength, after its return from the fighting in North Africa.

It is relevant here to say something about Divisional Commanders, and about General Gale in particular. It is a fact that the character and feelings of a commander are transmitted, as by a wave, out through the chain of his command, from the highest to the lowest, in an extraordinarily short time. What a general thinks and feels is thought and felt within a matter of hours or days by the corporal who collects the rations, and by the G.D.O. who lights the stove in the company office. Thus it is that it becomes so highly important for a Commander to think victory, and to feel victory all the time. Right from the earliest days, before the Division was fully formed, or had attained the status of a " known " division ; at a time when, perhaps, not more than 10% of its members had previously seen action, General Gale frequently talked to his officers and men. He always told them what he thought. He always told them that he was perfectly confident ; that he, in fact, knew that the Division would do the job which it had been set. More than one inexperienced young fellow must have asked himself the question : " Yes, but how does he know ? He does not know us all intimately, or even personally. We have never been in action. We do not even know how we shall react ourselves." To this there is only one answer : our Divisional Commander did know. And, gradually, through the long months of training, it became apparent to all his troops that he knew.

So, throughout the Division, men who had never met the Divisional Commander, some who did not even know his name, came to feel : " It will be all right. I have got good officers in charge of me, and they know what they are doing."

Spirits rose, confidence blossomed forth, and by the early summer of 1944 the Division knew the part which it had to play quite soon, and felt ready to acquit itself as Fate might decree.

J. M. G. Wilson.

AN AID TO BONE SURGERY

No excuse is required to justify the wiring of an article, the laudable object of which is to smooth away a difficulty in surgical technique.

Whilst watching a surgical procedure involving the sawing of bone, I was struck by the contrast of the electrically driven circular saw used and the primitive method whereby it was cooled. This was done by a stream of water directed on to the saw by an assistant who had for the purpose a syringe (Fig. 1) which he filled from a jug of water and squirted on the revolving blade.

Theoretically, the technique of this operation is simple, but in practice it is wasteful and inefficient. I suggest an alternative method of cooling which is simple and an improvement on the present method. But first I will justify its abandonment on the counts stated above.

It is wasteful of time and labour. It requires an assistant who, whilst engaged in using the apparatus is unable to help the operator in any other way, such as mopping or retracting, operations frequently required and necessitating a stoppage in the main procedure. The ease with which the syringe is broken, even in the most careful hands, its notorious slowness in filling and the rapidity with which it empties—all these factors conspire to cause loss of valuable time.

What condemns the method more than anything else is its *inefficiency.* Air bubbles mysteriously appear and cause a temporary cessation of flow. The force of the stream varies and its direction is apt to be erratic, especially when the apparatus is in unaccustomed hands. It is a tricky business to direct a stream of water on to

a revolving blade which varies its position with the whim of the operator. The result is that most of the fluid goes not on the saw but into the surrounding tissues, the swabs and towels, or on to the operator, or some harmless bystander.

The essentials of the apparatus I suggest should replace the existing one are a reservoir of saline at a convenient height connected with a fine nozzle which is fixed to the axle casing of the saw. Further points about it are indicated in the diagram (Fig. 2).

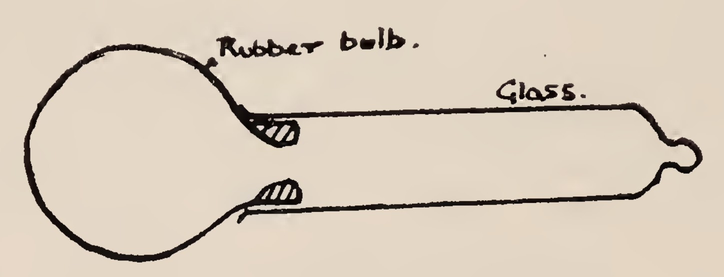


FIG. 1. SYRINGE.
x 1/8

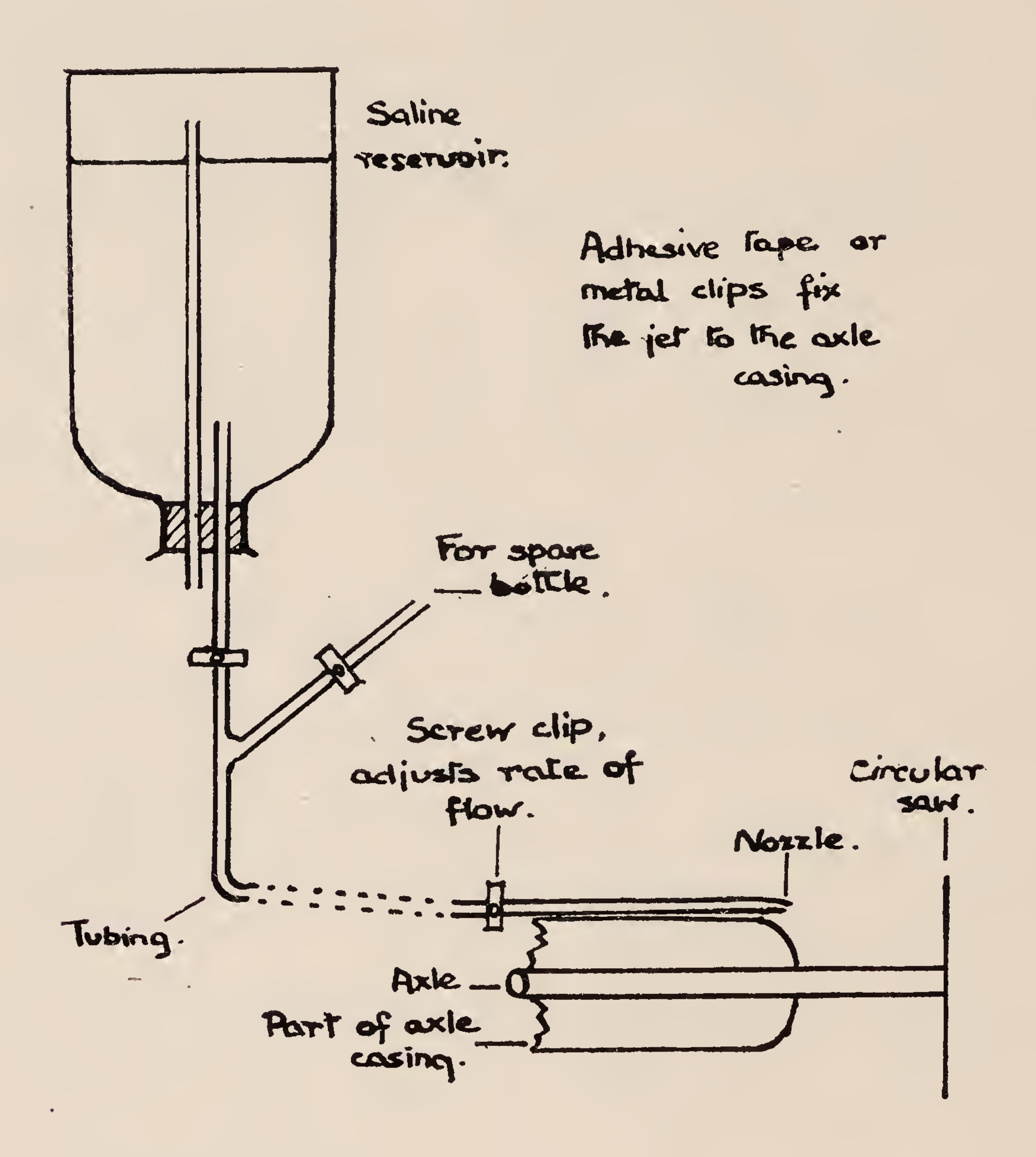


FIG. 2. DIAGRAM OF APPARATUS SUGGESTED, NOT DRAWN TO SCALE.

The necessary parts can easily be provided from ordinary theatre supplies. A blood transfusing stand for the fluid reservoir and some device for clipping the nozzle in position have been omitted from the drawing in order to clarify it.

The simplicity of the apparatus, its negligible expense and, I am sure, its efficiency, recommend it, and merit its being given a trial.

A.L.L.

FOUNDATION WEEK

May 20-25th, 1946

It was agreed by the Medical Society to mark the foundation of the Medical School on May 20th, 1838, this year by special entertainments and activities during the week May 20th–25th. The cancellation of lectures during those days was much appreciated and helped to lighten the load of the various organizers—who, nevertheless, were still aware that patients must be clerked and wounds dressed ; and are, in consequence, heartily to be congratulated on the efficiency with which they carried things through.

The Dramatic Society opened the festivities with a performance of Noel Coward's *Hay Fever* at the Tonbridge and Bedford Boys' Club in Judd Street, on Tuesday night, May 21st, with a repeat performance the next night at an hour sufficiently late to accommodate the nurses. I will say nothing of the play itself—it is enough to publish two reviews, quoting inside and outside opinions : but having acted prompter at several rehearsals I saw a good deal of back-stage activity, and realized what a tremendous lot of work went into the show. Mr. Russell wrestled with, cajoled, encouraged, persuaded, gently led, or acquiesced before his cast, with untiring energy and unfailing good humour, for hours and hours *and* hours, with some hours of Dr. Blake Pritchard's expert assistance, too. The cast encouraged and criticized itself and each other, and sat about hungrily devouring fish and chips at 10-30 p.m. and running through scenes ; the props came and went with faithful certainty (especially the marmalade and the haddock—had you ever realized what good haddock you can make from sodden Shredded Wheat ? at least, that's what it looked like close to) ; and the black cat wandered as he chose, even on the first night, when, if I remember rightly, Judith disposed of him just as if he were meant to be there. When, finally, I had seen the thing straight through from the hall instead of disjointedly from the side, I agreed (when I had managed to stop laughing) that it was a jolly good show.

On Thursday night came the Scavenge Hunt, devised and run by Mr. Arnold Levene. Hunting in couples from 7-30 p.m. to 9-30 p.m., the entrants sought out the most bizarre collections of articles. My partner almost assaulted an innocent inspector on the Underground to obtain a workman's ticket out of hours ; one very respectable cat in the Tower of London now has less black fur on than it should, and the very virtuous commissionaire of the Odeon, Tottenham Court Road, gave a hair from his head to two nice young ladies ; scarcely a ward was left undisturbed in the search for banana skins and bottles of saline purge, while Casualty did a roaring trade in skin sutures ; one quite coolly waylaid utter strangers—a red-headed girl from whose head to cut a curl, and a Yank from whom to beg gum ; and I must admit, ashamedly, to having hidden a tin helmet behind the bath lest it be found by a rival. As to the answers to a maiden's prayer—no, sorry, unprintable. The evening was finished off with an informal hop in the Refectory, and prizes awarded to the winners of the Hunt (Mr. Conway Don and partner) and to the runners-up. Funnily enough, no one transgressed the law—at least, no one had to be bailed out.

On Friday the Library was cleared and the first concert of what I think all who heard it hope will be a series, was held. That also deserves separate review.* Finally, on Saturday, after an excellent dinner in the Refectory, came the Ball. Mr. Feltham and the entertainments committee and their helpers worked with Trojan zeal to make a real success of it. The band was good, the " eats " were astonishing and delicious, though the unfortunate late-comers complained there was not enough ; whether the chronic alcoholics among us were satisfied with the bar or not I cannot say, but I heard no complaints, and the bar-tenders laboured like slaves with jug and bottle. And what a dignified setting the Library gave once

* Unfortunately this Review has not been received in time for publication.

more to the dance, with the newly returned portraits of the great surveying in mild surprise a glimpse of festivity instead of the studious silence they left when removed to safety, and which was to return again on Monday morning. A formal dance it was, too, with long frocks and black suits so almost universal as to give nearly pre-war grace to the effect. Too formal, we many of us thought, in the choice of dances, and though one had enjoyed it one was left with no feeling of having celebrated anything. We look forward to next year's Foundation Week.

J.D.C.

HAY FEVER

In the preface to his *Play Parade*, Coward says that *Hay Fever* is his best and most difficult play. He supposes that amateurs like doing it because it has nine characters and one set, and " the poor dears " don't realize that it requires the most polished acting technique possible to give it anything like its full value. Mr. Coward under-rates himself. Take nine people got-up to look like each of his characters, move them about the stage so that they don't get too much in each other's way, let them speak their lines clearly and intelligently, and the effect, though not perfection, is at the least very amusing—thanks to Mr. Coward's brilliant dialogue.

And this was more or less the effect of the U.C.H. Drama Society's show. The production followed fairly faithfully the lines indicated in the text and was quite adequate ; though here and there a lot more could have been done with the direction, " A Pause "—especially in the embarrassed conversation between the diplomat and the flapper.

By far the most difficult part to act is that of Judith Bliss, and here one would have liked Miss Everard to have been much softer and tellingly inconsequential. At the other extreme Mr. Polak, as David (her husband), almost nonchalented his character out of existence. Myra, I fear, almost did not come up to our essential requirements by speaking too quietly, though her acting was not insensitive. The highlights of the evening were the presentation of " Appendicitis " as an adverb by Jackie (Elizabeth Mattocks), and the eating of a sandwich by Sandy (Mr. Spaul). Both of these characters played well throughout, and at these points reduced the entire house, including myself, to hysterics. Such results, however, were not confined to them, so that at the end of the evening it was obvious that both cast and audience had thoroughly enjoyed themselves—which is all that really matters in amateur theatricals.

M. A. Kalina, L.U.D.S.

The University College Hospital Dramatic Society presented *Hay Fever*, by Noel Coward, on May 22nd. It is unfortunate that the plays of Coward are chosen so often by amateur societies in search of a good comedy within the scope of their available talent. *Hay Fever*, in particular, is not a good play ; it is poorly constructed, with characters of little substance. But, more important, like all Coward, it demands a special style which is so difficult for amateurs to capture. It is so easy for the humour to be thrown at the audience instead of being dropped carelessly as if it did not really matter ; one is much more amused after being temporarily taken in by the apparent seriousness or insignificance of any remark. Mr. Russell, however, interpreted the dialogue well, and few of the humorous lines failed to get across ; and this, perhaps, is the most important thing. His production was cramped by the size of the acting area, and, in the second act especially, his grouping left much to be desired. The absence of rise and fall of dramatic tension is inherent in the play and needs a master to disguise.

Miss June Smith made the most of the sketchy part of Myra Arundel, and showed above all that she possesses that rare quality of " stage sense." Miss Joy Everard played Judith Bliss with enthusiasm, and the drama seldom sagged when she was on. Mr. George Spaul, although not quite the right build for Sandy Tyrell, was most

amusing, but he unfortunately demonstrated how easy it is to over-act after getting a few well-earned laughs.

With all the difficulties of a hospital production overcome, the Society is to be congratulated for this performance, which was well received by an appreciative audience. It is hoped that the Society will be more bold and choose next a play of greater dramatic content with well-drawn characters ; although it may appear more difficult, these qualities will, in fact, make the task of the actors and producer more easy, and the result more satisfying.

A.L.T.
The London Hospital Medical College,
Member of the Oxford University Experimental Theatre Company.

DRAMATIC SOCIETY

The Society was formed in March of this year. In May the first production of the Society was presented during Foundation Week. A review of this show is to be found elsewhere in this Magazine.

Besides this stage production the Society has been holding frequent meetings for play-readings, poetry-readings and discussions on drama. Subjects have included " Contemporary Poets," by Mr. Bowscha ; " John Donne," by Miss Boodson, and " The Work of Oscar Wilde," by Mr. Feltham. There have been readings of *The Duchess of Malfi*, *The Critic* and *Break-Up* among other plays.

The success of the first stage show has encouraged us to a more ambitious undertaking in a larger and better theatre on October 16th and 18th, which it is hoped will receive support from all members of the Medical Society, to enable the Drama Society to stabilize itself and become a permanent part of the activities at U.C.H.

The two plays which have been chosen—*Everyman* and A. P. Herbert's *Two Gentlemen of Soho*—are contrasting in character, and it has been suggested that they are quite incompatible, but that remains to be seen. Neither of them is often produced on the stage, although both are very well known (for different reasons).

IN AFTER LIFE . . .

If you are feeling sad
Since on a case you've N.A.D.,
Remember M.U. and S.U.,
Who did their best for you.

If in diagnostic stock
You've nothing left but G.O.K.,
Faint not ; some healing touch
Was surely taught at U.C.H.

From page 72

Aconitum Napellus, or *Monkshood*, the root of which somewhat resembles a radish and which, when eaten, gives rise to numbness and paræsthesia of the mouth, lips and pharynx pathognomonic of this poison.

(Mistake—? deliberate—all tortoiseshell cats are female. Why call her Sam ? Ed.)

U.R.A.

WHAT ABOUT THE DACHSHUND ?

" And in that town a dog was found,
As many dogs there be,
Both mongrel, puppy, whelp and hound,
And curs of low degree."
OLIVER GOLDSMITH.

" THE greatest range of endocrinological curiosities, however, is to be found among dogs. In this species, an astonishing variety of breeds has been evolved, much greater than is seen with other domestic animals, and this has been made possible largely by great flexibility of the endocrine system. The Irish wolf-hound and the Great Dane are typical cases of simple giantism ; the blood-hound is typically acromegalic. As in humans, these two conditions may be combined, giving the St. Bernard dog and the mastiff. The bulldog shows achrondoplasia without dwarfism, the pekingese achrondoplasia with dwarfism. Toy dogs are simple pituitary dwarfs, Griffons are hypothyroid dwarfs, and so on. The great range of body size within the species is well shown in comparing the skeletons of the great dane and of the toy poodle. In some ways it is to be regretted that a comparable differentiation of types has not been possible in other species. A mouse as big as a guinea-pig, or a sheep as small as a rabbit would be useful additions to the armoury of the experimental biologist. Normal dogs, if such there be, include hounds, pointers and collies. By a process of selection and cross-breeding the endocrine disturbances responsible for deviation from racial type in dogs have become hereditary, and a most promising start has been made in the genetic analysis of the various conditions. Most of the breeds of dogs have their counterpart, to a lesser degree, in human types. Fortunately, in the absence of selection, the types have not become hereditary to the same extent as in dogs, but there can be no doubt about the decisive influence of endocrine make-up upon both mind and body."

Extract from a paper entitled " Hormones," by A. S. Parker, M.A., Sc.D., F.R.S., read before the Royal Society of Arts on 8th May, 1946.

THE GREAT—

DR. ROSENHEIM (*to out-patient with neuritis in right hand due to prolonged pressure during courtship*) : " The young lady seems to have got on your nerves."

AND

THE NOT SO GREAT

James Elstub : " Symmetrical cortical necrosis—is that brain or adrenals ? "

Patient (*to her female clerk*) : " You are not by any chance Dr. Walshe ? "

Surgical Unit Notes : " A pail old man. . . ." " The big toe has been amputated at the metacarpo-phalangeal joint."

ST. PANCRAS ARTS AND CIVICS COUNCIL

This Council, which has headquarters at the Town Hall in Euston Road, consists of representatives of educational, cultural and similar bodies in the Borough and certain national organizations.

The Arts Council sponsors concerts, exhibitions, dramatic performances, film shows, and co-ordinates the many similar activities taking place in the Borough.

Members of the Medical Society have been invited to join the Council as Associate Members (fee 2/- p.a.). Members receive notice of all functions and are admitted at reduced prices to concerts, recitals, dramatic shows, exhibitions, etc., sponsored by the Arts Council.

Further details and programmes are posted on the Medical School notice boards. The Secretary of the Drama Society has membership forms.

L.R.

The Autumn Session includes Sunday concerts, mid-week concerts and a carol concert ; film shows, dances, lectures and exhibitions ; a drama festival, a folk dance display, and a ballet circle. Admission at reduced prices to Arts Council activities is available to Associate members.

REVIEWS

A SHORT PRACTICE OF SURGERY. *By Hamilton Bailey, F.R.C.S., and R. J. McNeill Love, M.S., F.R.C.S. 7th Edition,* 1946. *H. K. Lewis, London. Price* 40s.

Most students will already be familiar with this excellent textbook of surgery ; to any who are not, it can be immediately recommended, and those whose introduction to clinical work included a study of Hamilton Bailey's *Physical Signs* will know with what good reason the recommendation is made. The book is called short, and is intended to be so, in spite of a slight increase in size over the sixth edition owing to introduction of new material. The title " practice " is equally well borne out by a thoroughly practical approach to the subject throughout, the inclusion of short clear details of operative procedure in the commoner operable conditions (repair of hernias, mastectomy, appendicectomy, etc.), and straightforward and uncontroversial instructions for treatment of most conditions discussed. The illustrations are incontrovertably excellent throughout. 141 new figures have been added, including a number of Dr. L. C. D. Hermitte's unique pathological colour photographs, besides some new black and white photographs. So that such a large number (1063 in 1040 pages of text) of figures may be included, Messrs. H. K. Lewis and Co. have adhered always to the principle that each shall be reduced in size as far as the limits of clarity allow, and shall show only the area concerned. The whole-page diagram of breast pathology (Fig. 817) should prove exceedingly helpful. This edition also includes a glossary of the Birmingham Revision synonyms of surgical anatomical terms. The production is of the same high standard as previous editions.

ANTENATAL AND POSTNATAL CARE. *By Francis J. Browne, M.D., D.Sc., F.R.C.S.(Ed.), F.R.C.O.G. Sixth Edition. Pp.* 644. *J. & A. Churchill Ltd., London. Price* 25*s.*

The popularity of this work is shown by the fact that this is the sixth edition since it was first published in 1935. This book is more than a mere textbook of midwifery, for besides conveying the basic principles of the subject, it gives a sound background and deals with important aspects which are lacking in other standard works.

In this new edition, the book has been revised throughout; the chapter on Radiology in Obstetrics has been revised by Professor Chasser Moir. The chapter on erythroblastosis and the Rh factor, and that on placenta prævia, show the most change. The former gives a clear explanation of a complicated subject, and shows the extreme importance of antenatal care in these cases with routine examination of the mother's blood for antibodies and the systematic recording of these results. The chapter on placenta prævia stresses the growing importance of Cæsarean Section as a treatment for this condition, and gives the figures quoted at a recent meeting of the Royal Society of Medicine on this subject, where the general trend of opinion was seen to be towards the adoption of this treatment as it appeared to give results superior to those of older methods. Further alterations are the inclusion of sections on angular pregnancy, acroparæsthesia, and the influence of rubella and other infectious diseases on congenital abnormalities. There is still a lot of work to be done on this last subject, and full statistical investigations along the lines suggested in this section may do much to solve what is at present a relatively obscure subject.

This book, besides being up to date in its teaching, is full of interest and easy to read, and is one with which every student should be familiar.

M.C.

VENERAL DISEASES IN GENERAL PRACTICE. *By Sverd Lomholt, M.D. Copenhagen), M.D.(Hon.) Riga, O.B.E. Pp.* 234. 1946. *H. K. Lewis, London. Price* 25*s.*

Prof. Lomholt is professor of clinical dermatology at Copenhagen, but his name is well known to all dermatologists. His Danish textbook on venereal diseases is widely used in the Scandinavian countries, and has gone through three editions. The present work in English had just been printed when the German occupation of Denmark took place. The author felt that it was not necessary to rewrite the clinical descriptions of the diseases, and has brought the book up to date by adding a supplement on treatment.

The book has been attractively produced and the illustrations are of a high standard. They are freely interspersed in the text, there being seventy-eight in black and white and thirty-one in colour. The supplement consists of eighteen pages and is lucid and well-reasoned. The author has not allowed himself to be carried away by sensational results reported in the use of penicillin in syphilis and gonorrhæa. In the latter disease he rightly admits that penicillin is the drug of choice, but he is careful to point out that it may mask syphilis in a case of double infection. In the case of syphilis Prof. Lomholt considers that the final judgment will have to be suspended. He wisely indicates that a total dosage of over two million units may be preferable, although just over a million units will probably cure most cases. This is in accordance with recent findings, which have indicated that the relapse rate is higher with the smaller dosage. Yet more problematical is the effect of penicillin on congenital syphilis and on the late manifestations of acquired syphilis, and these results will be awaited with interest.

It seems certain that Prof. Lomholt's book will be received as enthusiastically in this country as it was in his own, and we wish him all the success that his enterprise deserves.

G.J.C.

INTRODUCTION TO CLINICAL NEUROLOGY. *By Gordon Holmes, E. & S. Livingstone, Edinburgh.* 1946. *Price* 12*s.* 6*d.* *Postage* 6*d.*

Neurology has always been considered the most scientific of the clinical subjects and, therefore, lends itself more readily to an approach through anatomical and physiological principles. It is indeed a relief to turn from the textbook of neurology with its systematic descriptions of disease to this lucid exposition with its scientific approach. Although it only purports to be an " introduction " it is certainly more than the average student will require for a qualifying examination, but will be greatly sought after by young house physicians and students for higher degrees.

Too often an examination of the nervous system results in an enumeration of positive or negative observations, the sum total of which is far from clear. It is here that Dr. Gordon Holmes has given us the benefit of his extensive experience. He discusses the elucidation of the symptom-sign complexes, but more important than that he stresses the necessity of assessing the actual value of a particular observation. In the introductory chapter on signs and symptoms he points out that even though a patient achieve his end in a purposive action it does not necessarily follow that he has performed the action correctly. A brief chapter on the general aspect of pathology as applied to the central nervous system is followed by chapters on the various functions, *e.g.*, motor, sensory, reflex. visual, speech, the visceral nervous functions and the mental state. All through these chapters the signs and symptoms are carefully analysed and the relevant anatomical and physiological principles mentioned. No one who has read this could fail to realize how essential the basic principles of anatomy and physiology are to an understanding of clinical neurology.

A few spelling errors such as " focusing " on p. 14, " epigrastic " on p. 46, " dynanometers " on p. 59, and " detrussor " on p. 156, do not detract from a book in its first edition.

This book is certain to be employed by a large circle of medical men, and anyone who has read it cannot fail to be inspired in the same way as were hundreds of others who listened to Dr. Gordon Holmes's teaching in the wards at Queen Square.

G.J.C.

CARDIOVASCULAR DISEASE IN GENERAL PRACTICE. *By Terence East, M.A., D.M., F.R.C.P. 2nd Edition,* 1946. *H. K. Lewis, London. Pp.* X + 198. *Price* 12*s.* 6*d.*

This by present day standards ranks as a modest sized book on diseases of the heart and vessels. There is nothing in the text which is at serious variance with the teaching at U.C.H., although it places more emphasis on the separation of cardiac failure into predominately right and left ventricular types than was our custom up to 1939 at any rate. In this it clearly follows if it does not imitate the modern trend.

If it is more suitable for the practitioner anxious to revise than for the student it is because novelties such as thiouracil and thiocyanate are given a bald essential outline, while the student is expected to acquire a wider knowledge or else profess complete ignorance.

Nevertheless most students will gain far more from this book than from struggling through one of the larger books in which it is difficult to see the wood for the trees.

ASSISTANT MEDICAL REGISTRAR.

OCCUPATIONAL THERAPY FOR THE LIMBLESS. *By Phillis Littleton, C.S.P., M.A.O.T. Pp. viii* + 40. *H. K. Lewis,* 1946. *Price* 3*s.*

An interesting booklet clearly illustrated ; probably valuable in specialist fields.

PRACTICAL ANÆSTHESIA. *By J. Ross MacKenzie. Baillière Tindall & Cox. 2nd Edition,* 1946. *Price* 10*s.* 6*d.*

The second edition of this book has been enlarged slightly to include more of the basic facts concerning general anæsthesia. The chapter on the signs of anæsthesia is greatly improved, as is that on trichlorethylene.

This is a practical handbook and describes the various common anæsthetic machines and suggests methods of safe anæsthesia for most operative techniques. For these reasons it will be of great value to the student and house officer.

But there are too many illustrations of obsolete or simple equipment, so that in parts the book is reminiscent of an old surgical instrument catalogue. And too much space is occupied by minute descriptions of techniques, whereas not enough is devoted to stressing the essential relationship between anæsthesia and surgery.

B.G.B.L.

REGIONAL ANÆSTHESIA. *By H. W. L. Molesworth. 2nd Edition,* 1945. *H. K. Lewis, London. Pp. viii* + 92. *Price* 8*s.* 6*d.*

Apart from small alterations the second edition of this little book differs very little from the first. The author describes most of the common local anæsthetic techniques for major and minor surgery. In the early chapters the importance of the proper psychological approach to the patient is stressed and the necessity for the technique itself to be 100% effective. The author condemns the combination of local and general anæsthesia as, all too often, the latter is used solely to cover up defects in the local technique.

After this introduction it is a pity that the techniques themselves are not described in greater detail, the anatomy of the regions concerned usually being conspicuous by its absence.

This book is essentially based on those techniques which the author himself has found helpful in surgery and for this reason and that it may stimulate the reader to explore further the possibilities of local anæsthesia it is a useful addition to the literature.

B.G.B.L.

SELECTED PRESCRIPTIONS FOR MEDICAL STUDENTS. *By T. H. Bates, M.D.* 1946. *J. & P. Bealls, Ltd., Newcastle-on-Tyne.* 36 *pp. Price* 2*s.* 6*d.*; *post* 3*d.*

In this handy pocket book are collected a number of prescriptions which the author himself has found useful for the commoner ailments met in general practice. It is intended as a basis on which the newly qualified doctor may enlarge from his own experience as he progresses, and for the use of the final year student. A few notes relating to particular preparations are inserted, and those governed by Schedule 4 of the poisons regulations are indicated. A special children's section is appended.

" AIDS " Series.

AIDS TO MEDICAL DIAGNOSIS. *By G. E. F. Sutton.* 6*th Edition.*

AIDS TO PUBLIC HEALTH. *By Llewelyn Roberts.* 5*th Edition.*

AIDS TO DERMATOLOGY. *By R. M. B. MacKenna.* 3*rd Edition.*

AIDS TO THE DIAGNOSIS AND TREATMENT OF VENEREAL DISEASES. *By T. E. Osmond.* 1946.

Baillière, Tindall & Cox, London. Price 6*s. each, except " Venereal Diseases," price* 5/-.

Four new editions of this popular series have appeared in a few months, the last a completely new volume. There are those who use, swear on and all but live by Aids alone ; those who abuse them, and those who gracefully ignore them in pursuit of higher things ; but though the confident and the ambitious may scorn concise condensations of facts, the popularity of the books is well deserved.

Aids to Medical Diagnosis is a second complete revision by Frederick Sutton of Dr. A. J. Whiting's original book. Since the fifth edition appeared in 1940, rapid advances have been made in various fields, and short details of many of these have been included. Unhelpful speculations, for instance, in respect of the very latest work on electroencephalograms, have been omitted, but this subject, together with such work as the significance of the Rh factor, the crush syndrome, etc., have received attention. The chapters on coronary infarction, intussusception, and amœbic hepatitis have been re-written, and a careful revision of the section on cardiography made. There are forty-six line figures, including representative E.C.G. and E.E.G. tracings, and many facts are usefully and briefly tabulated, for instance a comparison of hypo- and hyperglycæmia, and the pathological findings in the cerebrospinal fluid in some dozen different diseases. There is full index.

It is eight years since the previous appearance of *Aids to Public Health*, a period in which events have centred attention on the health of the nation perhaps more than ever before. Evacuation has helped to show one half of the world how unhygienically the other half lives ; in a very real effort to safeguard the strength of the coming generation the Government has seen to the provision of nutritional supplements to children and mothers ; common interest has been aroused by the development of the Peckham Health Centre, and the proposal to start something on similar lines in Coventry ; and Public Health promises to emerge from the curricula of medical training courses in the new guise of Social Medicine. The progress made in both the theory and practice of Public Health has been great. The present volume provides not only the sound factual background of a book of reference (on everything from the depth of a grave to the volume of air advised per cow in the ideal cowshed—800 cubic feet, nearly seven times as much as a sailor is allowed in his cabin) but also mentions the important aspects of new work. There is a table of the more outstanding events in the history of public health, several clear diagrams illustrating ventilation, sewage disposal, etc., and a useful bibliography.

The venereal diseases have been separated at last from Dermatology and accorded a volume on their own. Since the last edition of *Aids to Dermatology* in 1939 the knowledge of venerealogy has increased so much as to demand more attention than a single chapter. Withdrawing all but the merest reference to syphilis has, however, not been made an excuse to enlarge the remainder of the volume very greatly, though extensive revision and some addition of new material has been made. The book remains a useful summary of the signs, symptoms and treatment of the commoner skin conditions.

Brigadier T. E. Osmond is Honorary Consultant in Venereal Diseases to the Army, and could scarce be more eminently suited for preparing an Aids volume on the subject. His purpose has been to provide some instruction in the management of venereal diseases, and as far as the rapid change of methods of diagnosis and treatment allows, to provide enough material for the student wishing to pass examinations, and the practitioner faced with early acute cases. Though the greater part of the book is devoted to gonorrhœa and syphilis, a few pages on the less common venereal diseases are added, and short sections on prophylaxis and social aspects. Apart from a somewhat clumsy construction on p. 129 (" [a condom] does not protect the skin around the base of the penis or the scrotum, and syphilitic sores in these areas are not uncommon, and is always liable to be torn ") the style is clear, and the headings in heavy type and the occasional inclusion of tables make it easy for reference and learning.

GYNAECOLOGY: A HANDBOOK FOR NURSES. *By G. H. Dodds, M.D., F.R.C.S., M.R.C.O.G. Faber & Faber Ltd.*, 1946. *Price* 10*s.* 6*d.*

This book will fill a very necessary space in the Senior Nurses' Library. It is well written and concise. The chapters on Anatomy and Physiology of the pelvic organs will be of particular interest to nurses intending to take their midwifery training.

The diagram of the menstrual cycle is so easily understood that it will enable nurses and midwives of the future to have a very clear picture of it. The manner in which diseases of the various parts of the genital tract have been divided into separate chapters will aid Final State Examination candidates. Rather more midwifery than is usual in a gynæcological textbook, but a very good innovation from the nurses' point of view, for whom this textbook has been written. I take the opportunity of heartily recommending this book and of congratulating the author on such a helpful and comprehensive study.

D. M. Billing (Obstetric Hospital).

THEORY AND PRACTICE OF NURSING. *By M. A. Gullan. 5th Edition,* 1946. *H. K. Lewis, London. Pp. vii* + 242. *Price* 12*s.* 6*d.*

This is the fifth edition of a book first published in 1920 with the object of providing a "working textbook, suggestive rather than exhaustive in character." The text would probably be more acceptable to the present day student if suitably amplified and illustrated by diagrams and photographs. The admirable aim of correlating the student's knowledge of physiology and anatomy with the nursing procedures is not entirely successful within so small a compass, the effect is somewhat disjointed, and the subject matter ranges from elementary physiology to nursing practice and notes on medical and surgical diseases in a manner which makes the book difficult to use as a nursing textbook.

An attempt has been made to bring the book up to date, but many statements are either contrary to present day teaching, or are so vague that they give little guidance to the student; *e.g.*, on page 6 an alternative method of sterilizing instruments is given as "immersion for 20 minutes to one hour in strong lotion such as carbolic 1-20 or lysol in spirit 1-20." On page 46 in the description of œsophageal feeding, the nurse is directed to exclude air from the tube before passing it by filling it with the feed; the usual practice is to pass the tube empty. Statements such as these markedly reduce the usefulness of a practical textbook.

P.R.R. (Nurses' Preliminary Training School).

A HANDBOOK OF RADIOGRAPHY. *By John A. Ross. 2nd Edition.* 1946. *H. K. Lewis, London. Price* 10*s.* 6*d.*

This handbook is intended for students and radiographers. The sales of the first edition indicated the need for a second, which has been revised and brought up to date by the inclusion of more recent work. In a book of its size one cannot expect to find an exhaustive survey of all methods of examination and all positions for filming, but all the most used placings are described. There are numerous line drawings, with some additions to the first edition, which are quite adequate to their purpose if sometimes uncomfortably disproportionate. There is also a short chapter on X-ray physics and a list of doses and prescriptions. The book should be of use to medical students for occasional reference.

Also received: DIRECTORY OF GUY'S MEN (MEDICAL AND DENTAL), INCORPORATING LIFE MEMBERS OF THE CLUB'S UNION. 19*th issue*, 1946. *Pp. xlii* + 161. *Price* 5*s.*

POEMS BY MAITLAND RADFORD. *Allen & Unwin*, 1945. *Limited Edition.* 7*s.* 6*d.*

We are not told whether the author intended to publish these poems which appear after his death, together with appreciations by several friends. They are the poems of his middle life and the book as a whole tries to give a record of the man in those years.

Maitland Radford qualified at U.C.H. in 1913, and he was till his last days M.O.H. for St. Pancras, so many connected with the Hospital will have known him. He married Graham Wallas' neice, and in the early part of the century mixed in Fabian circles, especially under the spell of Morris. This made a lasting impression, and finds voice in many of the poems dealing with the social problems he surely confronted in his work. But he had other and relaxing interests, fishing (UCH ?) among others, chess and poetry.

The poems here are none of them good ; more than one are thoroughly bad. (You do well to omit the first poem.) But he probably knew this, and I doubt if he cared. There is a note running through them all of honesty of idea, however ill it might be phrased. Yet there are patches, not so far apart, that are good, unequivocally good.

> " Suddenly ton upon ton and all day long unceasingly
> And all day next come shells come shells to bury utterly
> Our flimsy freight, our steady hope. Come shells enough to kill
> More men in half an hour than years of our poor anxious skill
> Could ever mend or patch or ease in death. Tumultuously
> Come swarming soldiers now who crowd aboard until they fill
> Our ship so that an arm can scarce be moved and still come still."

Written in 1915, this is the level of Owen at his finest. Like Owen's work it may have been said before, but never so sincerely.

Remember that the book is not published to give new poetry to the world, but that it tries to show another aspect, the so-called more human side, of a man's life which was such a success professionally ; remember that the book must be taken as a whole and the poems related to the setting and not treated individually, and the acquaintance of their author will be worth making even so belatedly. But don't, please don't, just open at random, pull a couple of poems to pieces and toss the book aside. Much better leave it alone.

WINK.

We still welcome any corrections to the Time Table printed overleaf.

Contributions for the Christmas issue, including suggested designs for the cover, (black, white and one colour) should reach the Editor not later than Monday, November 11th, 1946.

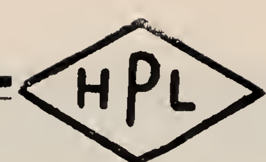
TIME TABLE

	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
Medical						
Dr. Hawkesley	1.30[2]	2.0[1]	—	—	—	—
Prof. Himsworth	—	1.30[2]	2.0[1]	—	—	—
Dr. K. Harris	2.0[1]	—	—	—	—	—
				1.30[2]		
Dr. A. Morland	—	—	10.0[1]	—	1.30[2]	—
D. B. Pritchard	—	—	—	10.0[2]	—	—
Dr. Walshe				2.0[1]		
Dr. Pochin*			1.30			
Surgical						
Mr. Davies	—	—	—	—	10.0[2]	—
Mr. J. Taylor*	11.30[3]	—	—	—	—	—
	2.0[2]	2.0[1]				
Mr. E. K. Martin	—	2.0[2]	10.0[1]	11.30[3]	—	—
Prof. Pilcher	—	11.30[3]	2.0[2]	—	10.0[1]	—
Mr. Gardham	—	—	11.30[3]	10.0[1]	2.0[2]	—
Mr. Barrington	—	—	—	—	—	2.0[2]
Mr. Matthews	—		10.0[2]	—	—	—
Mr. Flemming	—	-	—	2.0[2]	—	—
Eyes						
Mr. Neame	1.30[2]	—	—	—	10.0[4]	—
Mr. Shapland	—	10.0[4]	—	—	1.30[2]	—
E.N.T.						
Mr. Watkin-Thomas	—	9.0[2]	—	—	—	—
Mr. Kisch	—		—	—	9.0[2]	—
Skins						
Dr. Bamber	10.0[2]	—	—	—	—	—
Dr. Goldsmith	2.15[1]	—	—	10.0[2]	2.15[1]	—
Physio-Therapy						
(To be appointed)			Daily at	present		
X-Ray						
Mrs. Hilton	All day	—	All day	All day	—	—
Psychiatry						
Dr. Dillon	—	—	1.0[2]	—	—	—
V.D.						
Dr. Gwynne Thomas	5.30	—	5.30	—	5.30	—
O.H. †						
Mr. C. White	1.0[2] G.	—	—	—	—	—
(Prof. Browne)	—	—	9.0 G.	—	2.0[1]	—
Obstetric Unit	9.0 A.N.	10[1] A.N.‡	—	9.0 A.N.	—	9.0 P.N.
	—	2.0[1]	—	1.0 G.	—	—
Mr. N. White	—	—	—	—	9.0 G.	—
	—	—	—	—	1.0 A.N.	—
Children						
Dr. Pearson	—	—	—	10.15[1]	—	—
Miss Field	10.0[1]	—	10.0[2]	—	10.0[1]	—

* Taken by deputy.
† Clerks only.
‡ For Seniors only.

[1] Visit.
[2] Out-patients.
[3] Fracture Clinic.
[4] Operations

A.N. = Ante-natal Clinic.
P.N. = Post-natal Clinic.
G. = Gynæcological.



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M.9.

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